

# **EXHIBIT B**

**Wayne B. Norris, Principal Scientist, Norris Associates Technologies, LLC**



**Because Accuracy Matters™**

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**18 May 2023**

**Expert Witness Report**

**Airtech v Yim et al**

**BY**

**ROBERT AYERS, PROJECT MANAGER**

**WITH**

**WAYNE B. NORRIS, PRINCIPAL SCIENTIST**

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



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**EXECUTIVE SUMMARY**

1. My name is Robert Ayers. I have forty-five years of professional experience in management, business, finance, accounting, engineering, automotive technology, computer technology, and scientific research. Mr. Ayers was assisted in some of his investigations by another of our research staff, Ms. Nikki Ayers.

2. Nikki Ayers also has forty-five years of professional experience in management, business, finance, accounting, engineering, automotive technology, computer technology, and scientific research.

3. My name is Wayne B. Norris. I have had a long career in information technology, software development, computer forensics, nuclear research, and aerospace engineering, with service in the legal, commercial, military, aerospace, and national security communities, and have been a software developer since 1959. I have served as an expert witness in more than 100 technology related cases in federal, state, and municipal courts since 1986.

4. Our firm, Norris Associates Technologies, provides expert witness services in the areas of digital forensics, software intellectual property, engineering, and physics.

5. Mr. Robert Ayers has served as the Project Manager for this work. Mr. Norris has provided significant input and guidance. Either or both of us are prepared to provide sworn testimony in this matter, if required.

6. We were asked by attorneys for the Defense in the case of Airtech International vs BYUNG CHAN YIM A/K/A ROY YIM, et al to review materials presented to us and answer the following: (This report relies on insights from Mr. Eric Alvarez, of the firm Brach Eichler, counsel for Mr. Yim, during a discussion on 1/26/2023).

6.1. Examine representative items from the 842 items listed in the document Airtech-Yim Supplemental Response to Interrogatories.pdf. For the convenience of the reader, the 842 items are shown as APPENDIX 1 of this report. This is titled Exhibit A - Airtech Proprietary and Other Protected Products - Confidential

**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



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1       **6.2.** Determine the relative difficulty for an arbitrary business or individual to pur-  
2 chase those representative items. Specifically, we were asked to make this de-  
3 termination with respect to the suppliers listed in

4       **Airtech-Yim Airtech Responses to Defendants Interrogatories.pdf.**

5 For the convenience of the reader, the 69 listed suppliers are shown as  
6 APPENDIX 2 of this report.

7       6.2.1. Within budget and schedule limitations, we examined 31 individual  
8 items chosen at random plus 327 items from a single supplier that were  
9 all metal alloys. The randomizing process is described later in this docu-  
10 ment.

11       6.2.2. To maintain objectivity, we reported the difficulty of purchasing  
12 listed items “EASY”, “LIKELY”, “MEDIUM”, “HARD”, and “UNDE-  
13 TERMINATED”.

14       6.2.2.1. We categorized 14 items as having “EASY” purchase diffi-  
15 culty. These were easy to find and readily obtainable online:

16       6.2.2.2. After significant research, we categorized the 327 different al-  
17 loys sold by Tri-Tech Metals, Inc. as “LIKELY”. In this con-  
18 text, that term refers to the high likelihood that the alloys are  
19 easy to purchase. These alloys constitute more than one-third  
20 [38.8%] of the total 842 items. As explained below in more  
21 detail, most of the alloys are known by multiple identifiers, but  
22 in all cases where we discovered and used the proper identi-  
23 fier, the ability to purchase them was easy.

24       6.2.2.3. We categorized 3 items as having “MEDIUM” purchase diffi-  
25 culty. These had item numberings and descriptions that were  
26 complex due to part number changes or only being listed un-  
27 der an interchange number, not necessarily being listed by  
28 the named vendors, causing difficulty in locating the items or

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attempting to match specifications for Form, Fit & Function analysis.

6.2.2.4. We categorized 9 Items as “**HARD**” to purchase. These were either:

- Likely unavailable at any price; or else
- Available only from an extremely limited number of suppliers, including a single supplier, who refused to take new customers.

6.2.2.5. We categorized 5 items as “**UNDETERMINED**”. These included items for which Internet listings may not have been available, or for which no response, either positive or negative, was received after reaching out to the vendors.

- We originally did not have this category. However, it was our experience that several vendors appeared at first to be unresponsive but later did respond with either a quote, unavailable status, already allocated or a “no quote” response.
- We attributed this to the relatively short time frame available for our analysis, which was shorter than industry purchasing cycle norms for many types of purchases.
- For that reason, attributing these types of items to one of the other categories would be incorrect, so we defined the “**UNDETERMINED**” category.

**DISCUSSION**

This analysis was performed in two Phases. As is customary in research of this type, we applied lessons learned in Phase 1 to our work in Phase 2 and backpropagated those lessons to the Phase 1 items included in this final, comprehensive analysis.

**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



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1 In Phase 1, we sampled 18 items of the 842. In Phase 2, we used a random number gen-  
2 erator to list the additional items in random order and researched them in that order.

3 As we progressed through the list, we assigned each item one of the five categories  
4 above.

5 As discussed above, during Phase 1, we were unable to assess the effects of our time  
6 constraints on our ability to obtain useful information in the time we were allotted. For that  
7 reason, in Phase 1, we used only the categories of "EASY", "MEDIUM", and "HARD".

8 During Phase 2 we performed sufficient additional research to allow us to realize that:

- 9 • This 3-category taxonomy could incorrectly force items for which we had insuffi-  
10 cient data into the "HARD" category and,
- 11 • The metal alloys deserved their own category.

12 For those reasons, we adopted the 5-category taxonomy described above.

### 13 **SAMPLES AND CHARACTERIZATION**

14 Our sampling results are shown in the table in Appendix 3.

15 In Phase 1, Mr. Ayers researched 17 items and Wayne researched 1 item. Items were  
16 chosen at random. These are the first 18 items in the Appendix 3 table.

17 In Phase 2, Mr. Ayers analyzed additional line items chosen by a random number genera-  
18 tor. These are also shown in the table in Appendix 3. Additionally, we performed a group  
19 analysis of the 327 different alloys sold by Tri-Tech Metals, Inc. These are also shown in  
20 Appendix 3.

### 21 **RANDOM NUMBER GENERATOR DETAILS**

22 To sort the list of 842 items in random order, we entered them into an Excel spreadsheet  
23 in order by their Master List Number as shown in Appendix 1. We then entered another  
24 column containing the Excel RAND() function, which is based on the Mersenne Twister

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1 Algorithm<sup>1</sup>. This created a column containing 842 pseudorandom numbers between 0 and  
2 1. Because the RAND() is a seedless volatile algorithm, we created an identical nonvola-  
3 tile column using the COPY-PASTE-VALUES operation. We then sorted the entire table  
4 by that column. That table's values are shown in Appendix 3, minus the randomizing col-  
5 umns, which are irrelevant to this document.

---

<sup>1</sup> [https://en.wikipedia.org/wiki/Mersenne\\_Twister](https://en.wikipedia.org/wiki/Mersenne_Twister)

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1 **A. SCHEERER BEARING 10189/1060 Master List Item 1**

2 **B. SCHEERER BEARING 13189/1060, Master List Item 2**

3 Mr. Ayers requested quotations from HVH Industrial.com. The supplier replied that these  
4 are proprietary bearing numbers.

2023-01-26 (4).png

hvhindustrial.com/brand/scheerer-bearing?gclid=Cw6CAASde2hBnZwAR0mZg9w3UFP5cy8hp-Sj2bwaCg9sBN68825T\_1NN6HMDXZYGg9f7a8C4eeCHfDQAVd\_BwE

PRODUCTS BRANDS ABOUT US BLOG CONTACT Login Register View Cart(0)

Search by Keyword, Part #, Mfr #, Etc...

1(866)577-4040  
or  
Request a quote

Contact Information

Robert Ayers  
Norris Associates Technologies  
rayers@norris-associates.com  
805-452-3661

Product Information

Scheerer Bearing Qty: 1  
10189/1060 & 13189/1060  
These part numbers are for a ball thrust bearing. Would you please send me a quote for 50 pieces of each. Thank You.

ATTACH FILES  
Request a quote

I'm not a robot

Welcome to our site. If you need help simply reply to this message, we are online and ready to help.  
Customer Support 18 minutes ago  
Type here and press enter

Chat Now

2023-01-26 (3).png

hvhindustrial.com/order-completed

PRODUCTS BRANDS ABOUT US BLOG CONTACT Login Register View Cart(0)

Search by Keyword, Part #, Mfr #, Etc...

Home QUOTE SENT

Thank you! Your quote request has been received. We will get back to you shortly.  
Continue Shopping

Your opinion is very important to us. Please let us know how we can improve our website and services to better serve you.

Comments

Send

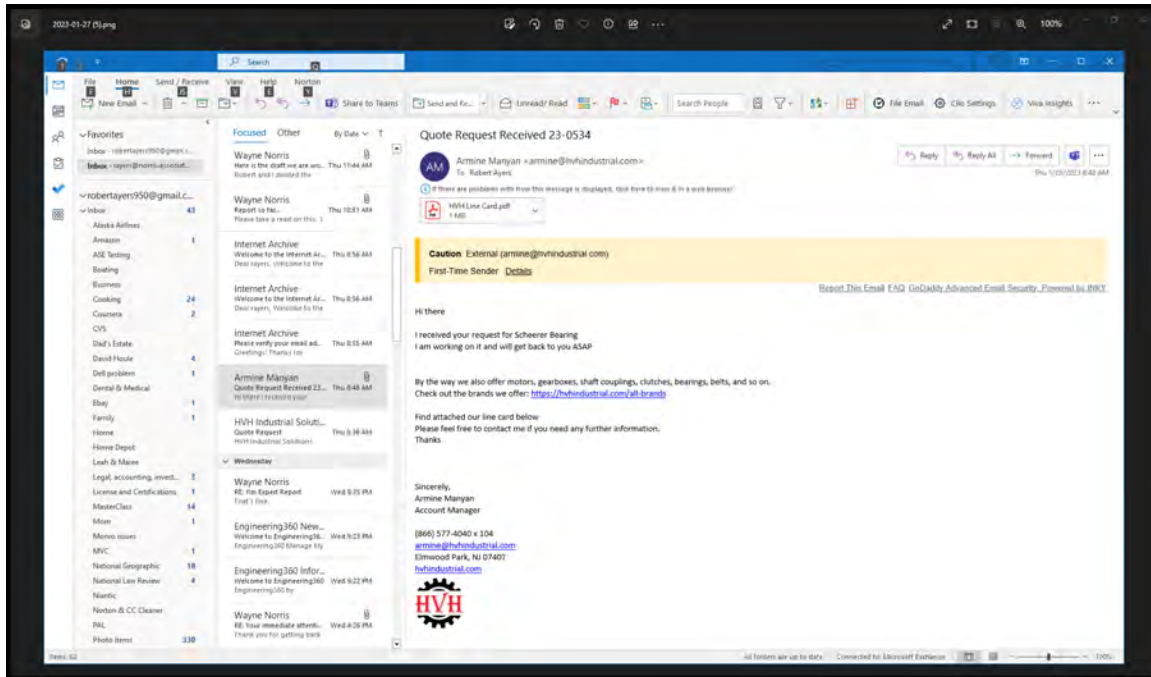
Chat Now



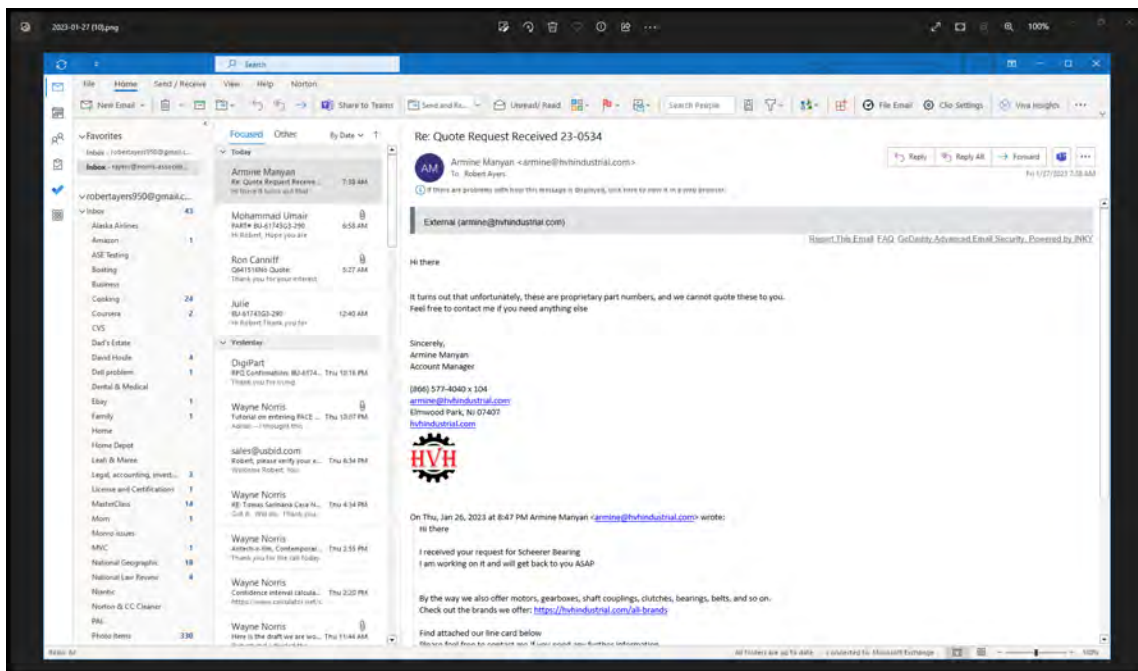
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1



2

We postponed additional inquiries from other suppliers pending completion of the list of sample items.

For these reasons we rated the 1<sup>st</sup> item on the sample list as **HARD**.

For these reasons we rated the 2<sup>nd</sup> item on the sample list as **HARD**.

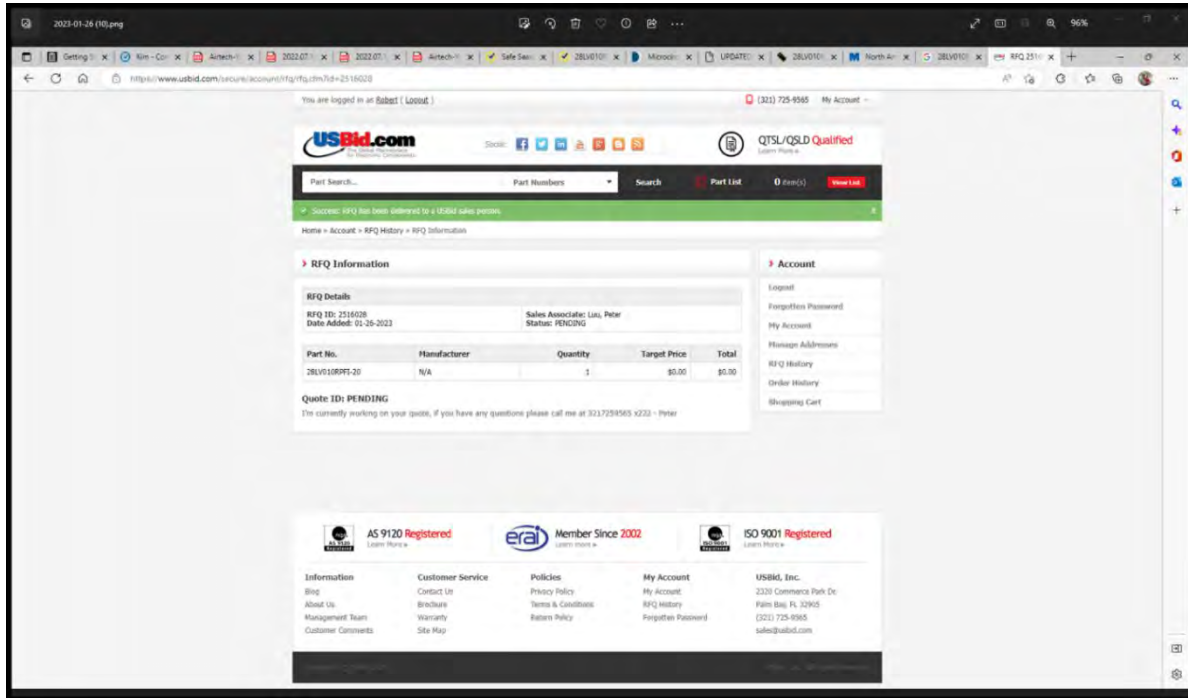
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**C. DATA DEVICE CORPORATION 28LV010RPFI-20 INTEGRATED CIRCUIT, Master List Item 182**

Mr. Ayers requested a quote from Data Device Corporation, supplier number 12 of the 69 listed suppliers. As of the time of this writing, they had not yet responded.



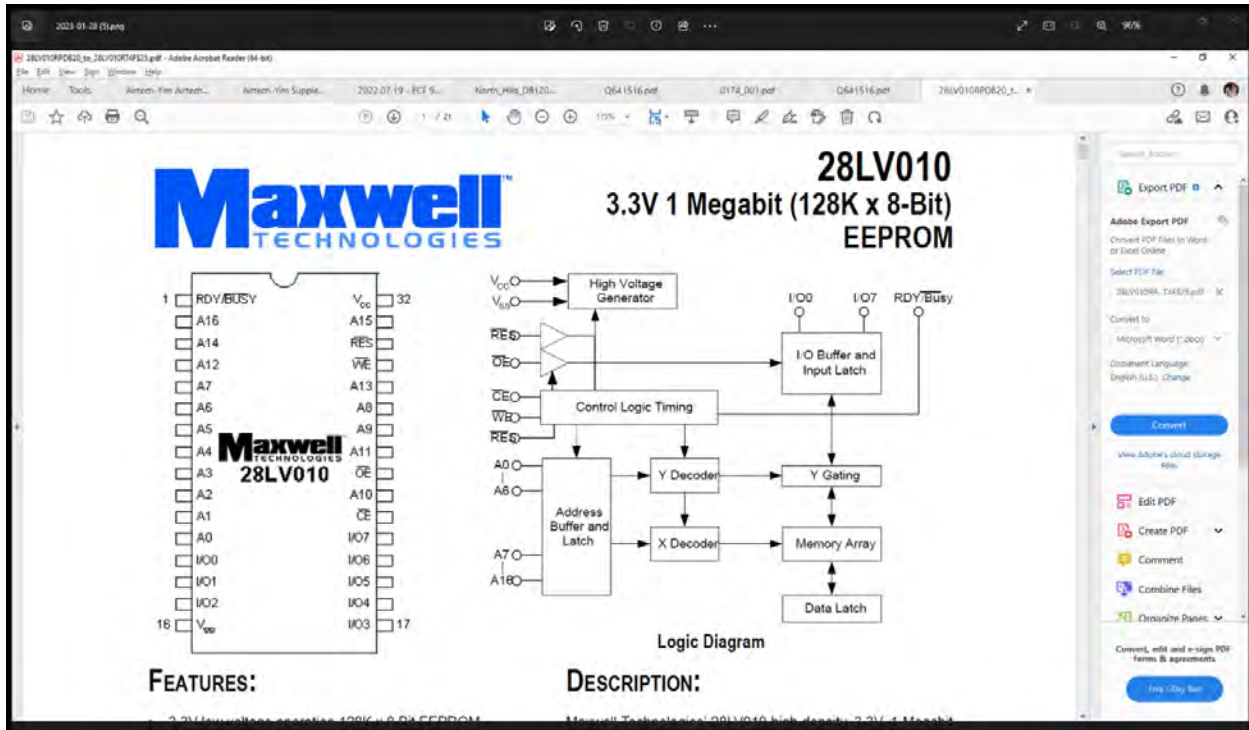
Mr. Ayers located a specification document for the 28LV010RFPI-20 IC but was not able to locate an equivalent component.



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1

2 For those reasons we rated the 3<sup>rd</sup> item on the sample list as **HARD**.

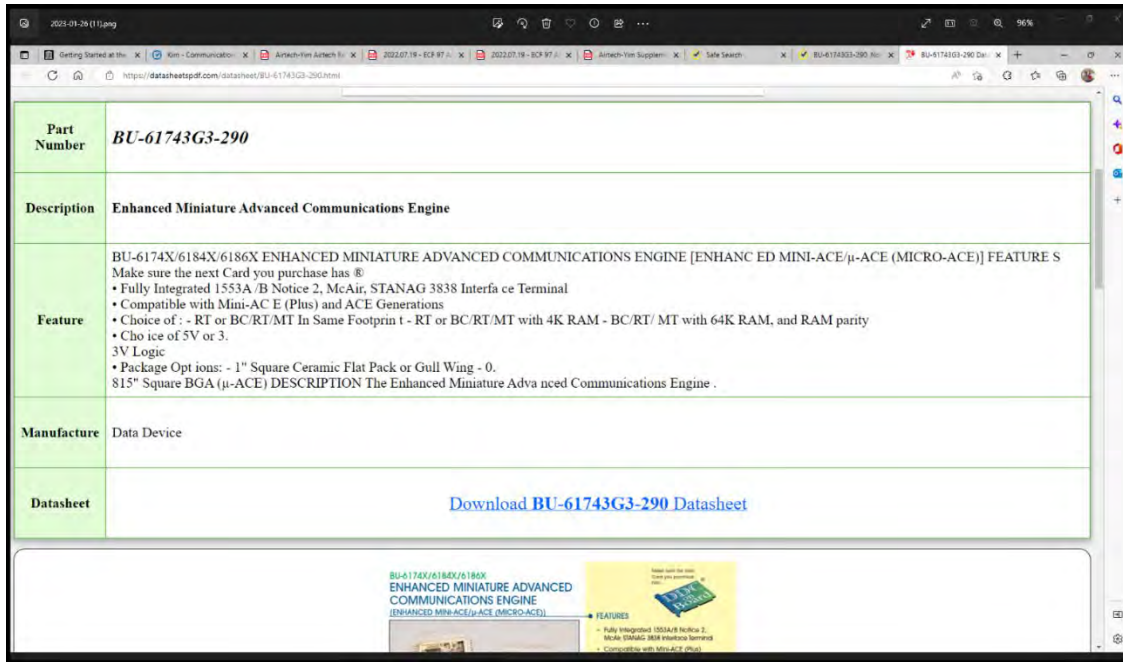
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1 **D. DATA DEVICE CORPORATION BU-61743G3-290 INTEGRATED CIRCUIT BUS**  
2 **CONTROLLER, Master List Item 188**

3 Mr. Ayers located a description of the listed part number.



4  
5 He identified a minimum of ten suppliers listing that part number in inventory.

6

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1

2023-01-26 (13).png

Setting Startup... Kim - Common... Autodesk/Free... 2022-07-19 - E... 2022-07-19 - E... Autodesk/Free... Safe Search... BU-61743G3-2... BU-61743G3-2... BU-61743G3-2... BU-61743G3-2...

https://www.digipart.com/part/BU-61743G3-290

DigiPart Search electronic parts About Quality Distributor

BU-61743G3-290 Price & Stock

Distributors

All Sellers 9 DigiPart Trusted 2 Authorized Only 0 Exact Matches

Vyrion Vyrion Certificates

Part #	Manufacturer	Description	Stock	Price	Buy
BU-61743G3-290	DATA DEVICE CORP	MI-Std-1553 Controller, 2 Channel(s), 0.125Mbps, CMOS, CQFP72, DC 2020	1813		<a href="#">Buy</a>

Giotronic Giotronic Ltd Certificates

Part #	Manufacturer	Description	Stock	Price	Buy
BU-61743G3-290			Available		<a href="#">Buy</a>

GlobalTEK GlobalTek Components Certificates

Part #	Manufacturer	Description	Stock	Price	Buy
BU61743G3290	DATA DEVICE CORP	OEM/CM QUOTES ONLY   NO BROKERS	13		<a href="#">Buy</a>

New Stepmoth Electronic co., Limited

2

2023-01-26 (13).png

Setting Startup... Kim - Common... Autodesk/Free... 2022-07-19 - E... 2022-07-19 - E... Autodesk/Free... Safe Search... BU-61743G3-2... BU-61743G3-2... BU-61743G3-2... BU-61743G3-2...

https://www.digipart.com/part/BU-61743G3-290

DigiPart Search electronic parts About Quality Distributor

BU-61743G3-290 Price & Stock

Distributors

All Sellers 9 DigiPart Trusted 2 Authorized Only 0 Exact Matches

Vyrion Vyrion Certificates

Part #	Manufacturer	Description	Stock	Price	Buy
BU-61743G3-290	DATA DEVICE CORP	MI-Std-1553 Controller, 2 Channel(s), 0.125Mbps, CMOS, CQFP72, DC 2020	1813		<a href="#">Buy</a>

Giotronic Giotronic Ltd Certificates

Part #	Manufacturer	Description	Stock	Price	Buy
BU-61743G3-290			Available		<a href="#">Buy</a>

GlobalTEK GlobalTek Components Certificates

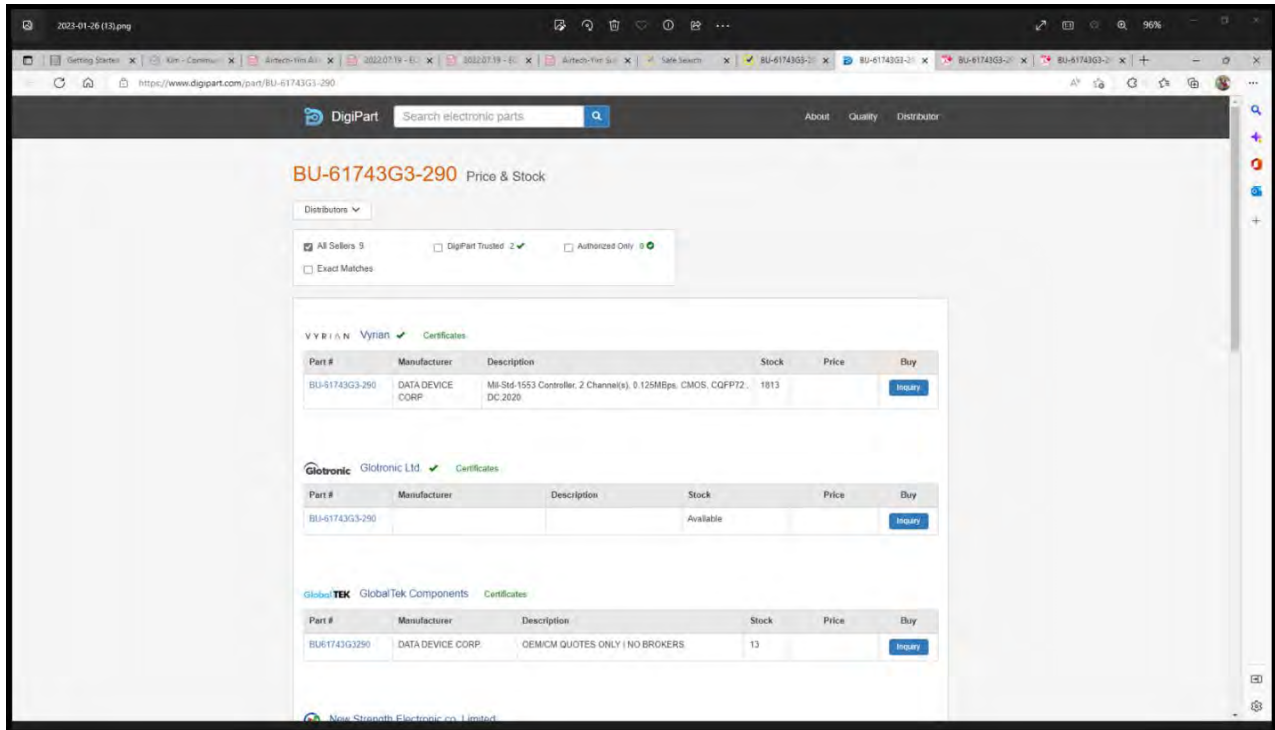
Part #	Manufacturer	Description	Stock	Price	Buy
BU61743G3290	DATA DEVICE CORP	OEM/CM QUOTES ONLY   NO BROKERS	13		<a href="#">Buy</a>

New Stepmoth Electronic co., Limited

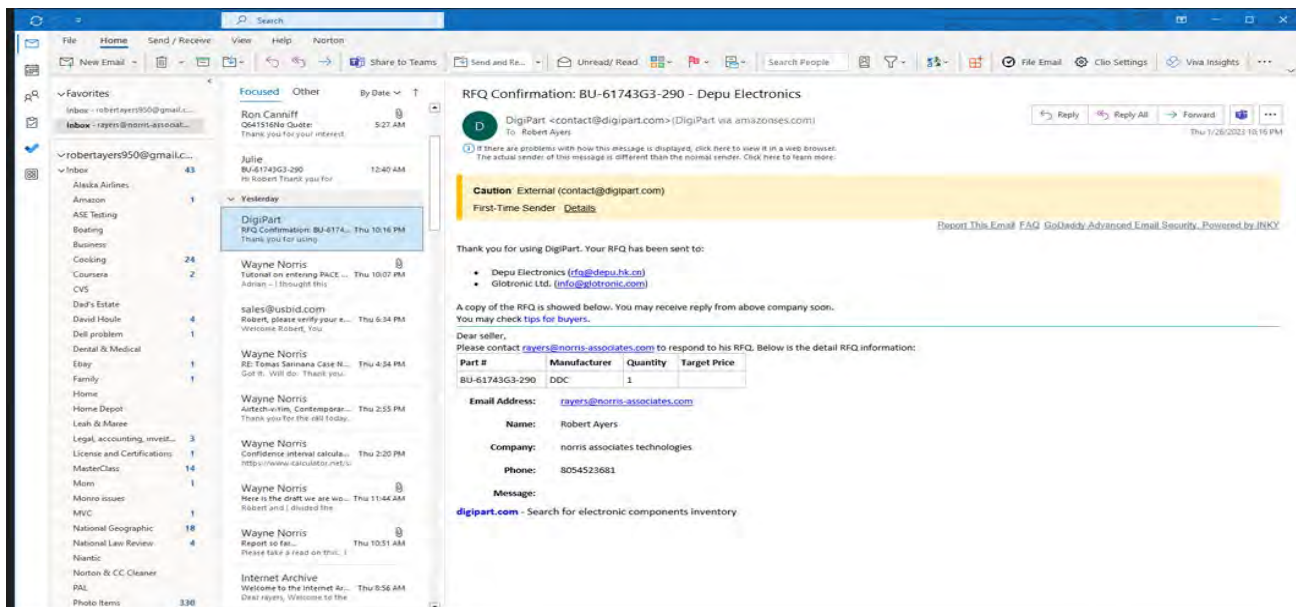
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- 1
- 2 Mr. Ayers requested a quote from wholesaler aggregator DigiPart and received the follow-
- 3 ing response, requesting responses from two of DigiPart's listed suppliers.

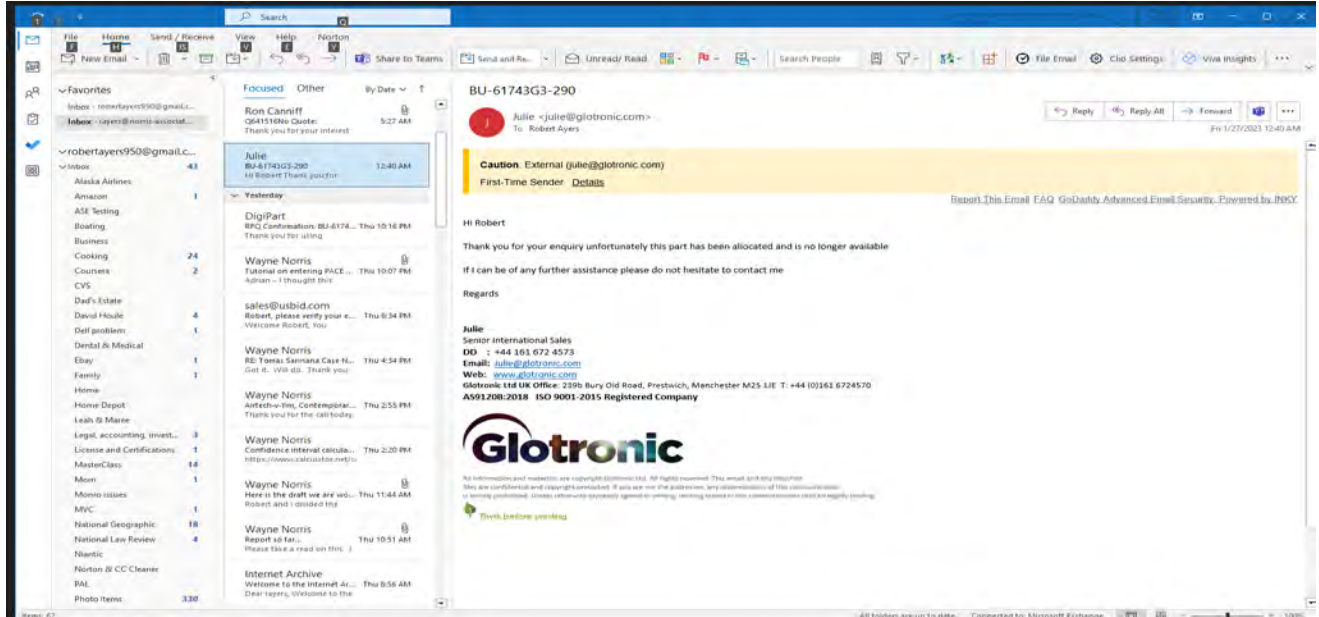


- 4
- 5 As shown below, the BU-61743G3-290 is no longer available from one of them.

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1

2 The other supplier has not yet replied as of the date of this document.

3 For those reasons we originally rated the 4<sup>th</sup> item on the sample list as **HARD**.in Version 1  
4 of this report.

5 After the initial report was prepared and presented, Mr. Ayers received a reply to his Re-  
6 quest For Quote from Vyrian, Inc.



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3931 Ann Arbor Drive,  
Houston, TX, 77063  
United States  
P: 281-404-3420  
F: 408-854-8571

## Quote# 253735

Customer  
Norris Associates Technology

Sales Representative  
Mohammad Umair

Date: 27-01-2023  
Terms: TT Advance  
Status: Open

Robert Ayers  
P: +18059627703  
E: rayers@norris-associates.com

E: mumair@vyrian.com

### Customer Notes:

#	Qty	Internal P/N	Mfg / PN / DC / Pkg	RoHS / LT / Cond / Incoterm	Unit Price	Line Total
1	1		Data Device Corp / BU-61743G3-290 / 0420 / Unknown	Unknown / 3 - 5 days / New & Original / FCA Houston	\$1420.7	\$1,420.7

Description: Mil-Std-1553 Controller, 2 Channel(s), 0.125MBps, CMOS, CQFP72  
HTS Code: 8542.31.0001

\*\*\* Additional Duty On Imports May Apply \*\*\*

Total: \$1420.7

Mohammad Umair | E: mumair@vyrian.com | Toll-Free: (866)-874-0598 | Direct: +18324161391 | Fax:

- 1
- 2 After receiving the quote and finding the part is available for sale, we have changed our
- 3 classification of this part, the 4<sup>th</sup> item on the sample list, from **HARD** to **EASY**.

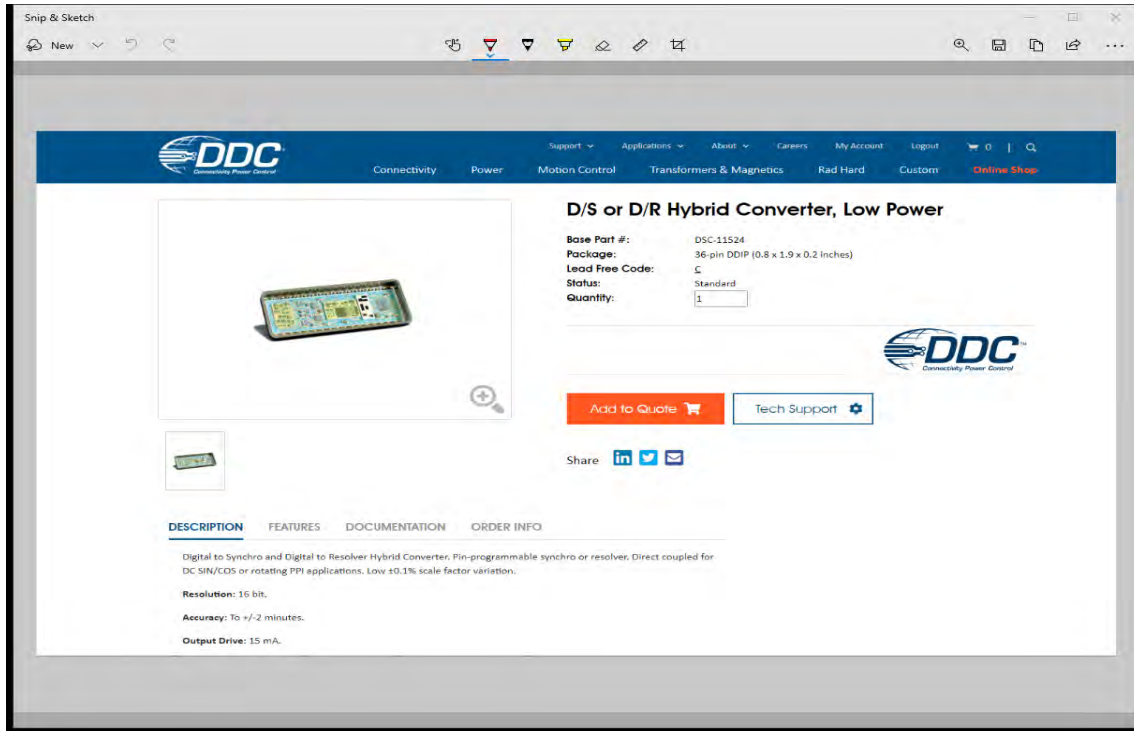
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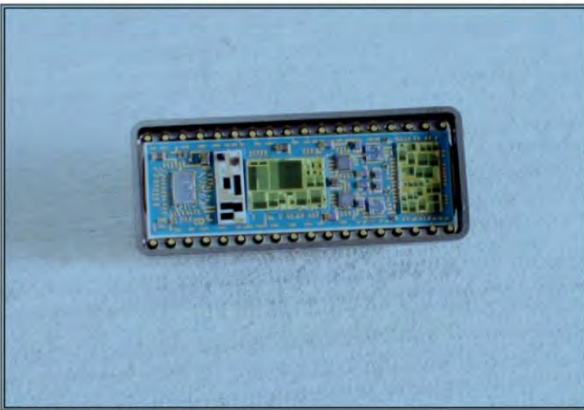
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**E. DATA DEVICE CORPORATION DSC-11524-204 INTEGRATED CIRCUIT, Master List Item 203**

Mr. Ayers located a description of the listed part number.



**DSC-11524**  
**16-BIT HYBRID D/S AND D/R**  
**CONVERTER PIN PROGRAMMABLE**  
**FOR SYNCHRO OR RESOLVER OUTPUT**



**DESCRIPTION**

The DSC-11524 is a versatile multiplying Digital-to-Synchro/Resolver converter.

Make sure the next  
Card you purchase  
has...



**FEATURES**

- 15 mA RMS Output
- 11.8 V<sub>L-L</sub> Synchro, 11.8 V<sub>L-L</sub> Resolver, or 6.81 V<sub>L-L</sub> Resolver Output
- 8 Bit/2 Byte Double-Buffered Transparent Latches
- Pin Programmable for Synchro or Resolver Output
- 16-Bit Resolution
- Complete D/S and D/R Converter
- Mate to DSC-36020 IBM® PC Card
- DC-Coupled Reference Accepts Any Waveform
- Generates SIN/COS DC or Rotating PPI Sweep

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- 1 In the process of searching, he located a minimum of 6 Form-Fit-Function equivalent
- 2 chips, although no original chips.

**DSC-11524-204** by Data Device Corporation  
Digital to Synchro or Resolver, Hybrid, DDIP-36

Quick Jump: [CAD Models](#) [Part Data Attributes](#) [Alternate Parts](#)

Temperature Grade	INDUSTRIAL
Terminal Finish	TIN LEAD
Terminal Form	PIN/PEG
Terminal Pitch	2.54 mm
Terminal Position	DUAL
Width	19.7 mm

**Alternate Parts for: DSC-11524-204**

This table gives cross-reference parts and alternative options found for DSC-11524-204. The Form Fit Function (FFF) tab will give you the options that are more likely to serve as direct pin-to-pin alternates or drop-in parts. The Functional Equivalents tab will give you options that are likely to match the same function of DSC-11524-204, but it may not fit your design. Always verify details of parts you are evaluating, as these parts are offered as suggestions for what you are looking for and are not guaranteed.

[FFF Equivalents \(4\)](#) [Functional Equivalents \(6\)](#)

Part Number	Description	Manufacturer	Compare
DSC-11524-473 CONVERTERS	Digital to Synchro or Resolver, Hybrid, DDIP-36	Data Device Corporation	DSC-11524-204 vs DSC-11524-473
DSC-11524-153 CONVERTERS	Digital to Synchro or Resolver, Hybrid, DDIP-36	Data Device Corporation	DSC-11524-204 vs DSC-11524-153
DSC-11524-404 CONVERTERS	Digital to Synchro or Resolver, Hybrid, DDIP-36	Data Device Corporation	DSC-11524-204 vs DSC-11524-404
DSC-11524-173 CONVERTERS	Digital to Synchro or Resolver, Hybrid, DDIP-36	Data Device Corporation	DSC-11524-204 vs DSC-11524-173
DSC-11524-294 CONVERTERS	Digital to Synchro or Resolver, Hybrid, DDIP-36	Data Device Corporation	DSC-11524-204 vs DSC-11524-294
DSC-11524-474 CONVERTERS	Digital to Synchro or Resolver, Hybrid, DDIP-36	Data Device Corporation	DSC-11524-204 vs DSC-11524-474

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- 3
- 4 In addition, he found one chip, the DSC-11524-894, with identical specifications except
- 5 Max Operating Temperature.

**Alternate Parts for: DSC-11524-204**

This table gives cross-reference parts and alternative options found for DSC-11524-204. The Form Fit Function (FFF) tab will give you the options that are more likely to serve as direct pin-to-pin alternates or drop-in parts. The Functional Equivalents tab will give you options that are likely to match the same function of DSC-11524-204, but it may not fit your design. Always verify details of parts you are evaluating, as these parts are offered as suggestions for what you are looking for and are not guaranteed.

[FFF Equivalents \(4\)](#) [Functional Equivalents \(6\)](#)

Part Number	Description	Manufacturer	Compare
DSC-11524-303 CONVERTERS	Digital to Synchro or Resolver, Hybrid, DDIP-36	Data Device Corporation	DSC-11524-204 vs DSC-11524-303
DSC-11524-132 CONVERTERS	Digital to Synchro or Resolver, Hybrid, MDIP36, 0.780 X 1.900 INCH, 0.210 INCH HEIGHT, DDIP-36	Data Device Corporation	DSC-11524-204 vs DSC-11524-132
DSC-11524-543 CONVERTERS	Digital to Synchro or Resolver, Hybrid, DDIP-36	Data Device Corporation	DSC-11524-204 vs DSC-11524-543
DSC-11524-564 CONVERTERS	Digital to Synchro or Resolver, Hybrid, DDIP-36	Data Device Corporation	DSC-11524-204 vs DSC-11524-564

- 6
- 7 For those reasons we rated the 5<sup>th</sup> item on the sample list as **EASY**.



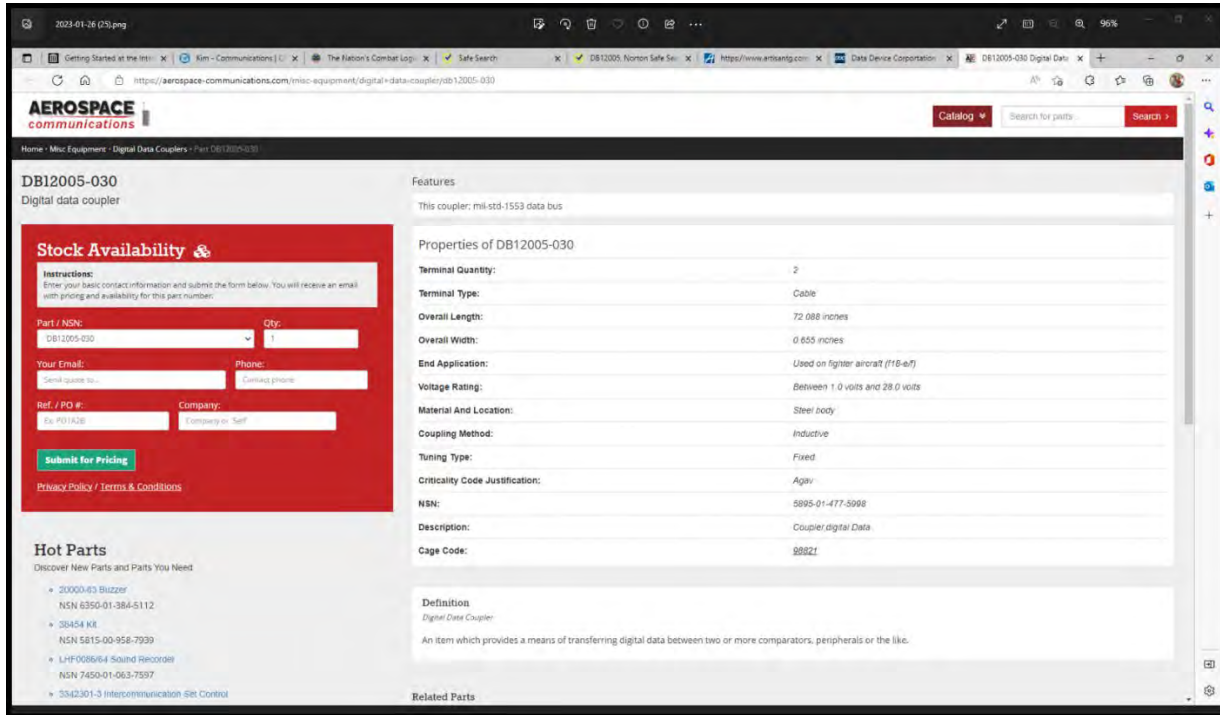
Robert Ayers, Project Manager, Norris Associates Technologies, LLC



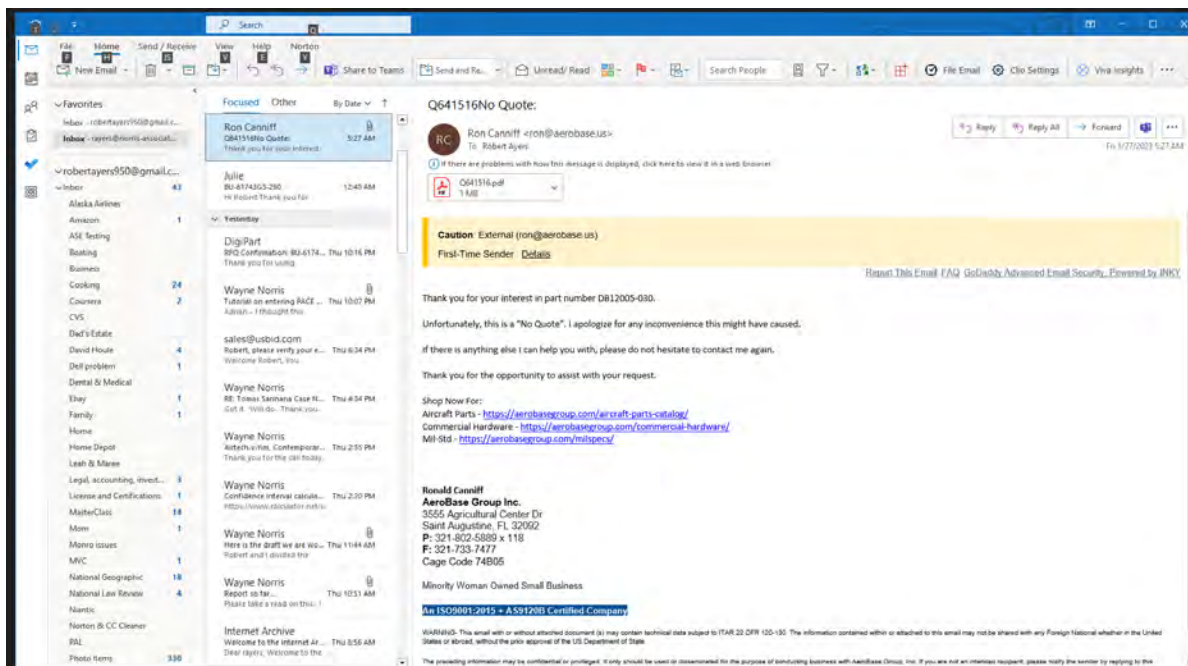
**Because Accuracy Matters™**

1 **F. BETA TRANSFORMER DB12005 DATA BUS COUPLER, Master List Item 235**

2 Mr. Ayers located a description of the listed part number with a suffix of -30.



3  
4 He requested a quote and received the following reply.

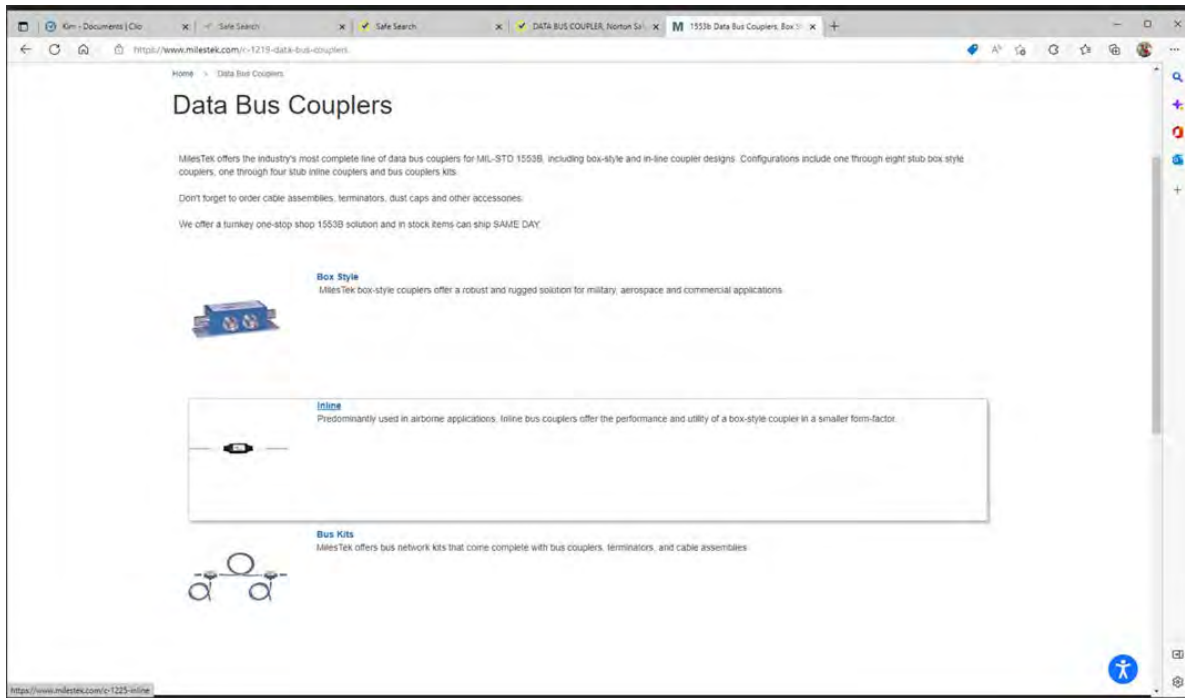
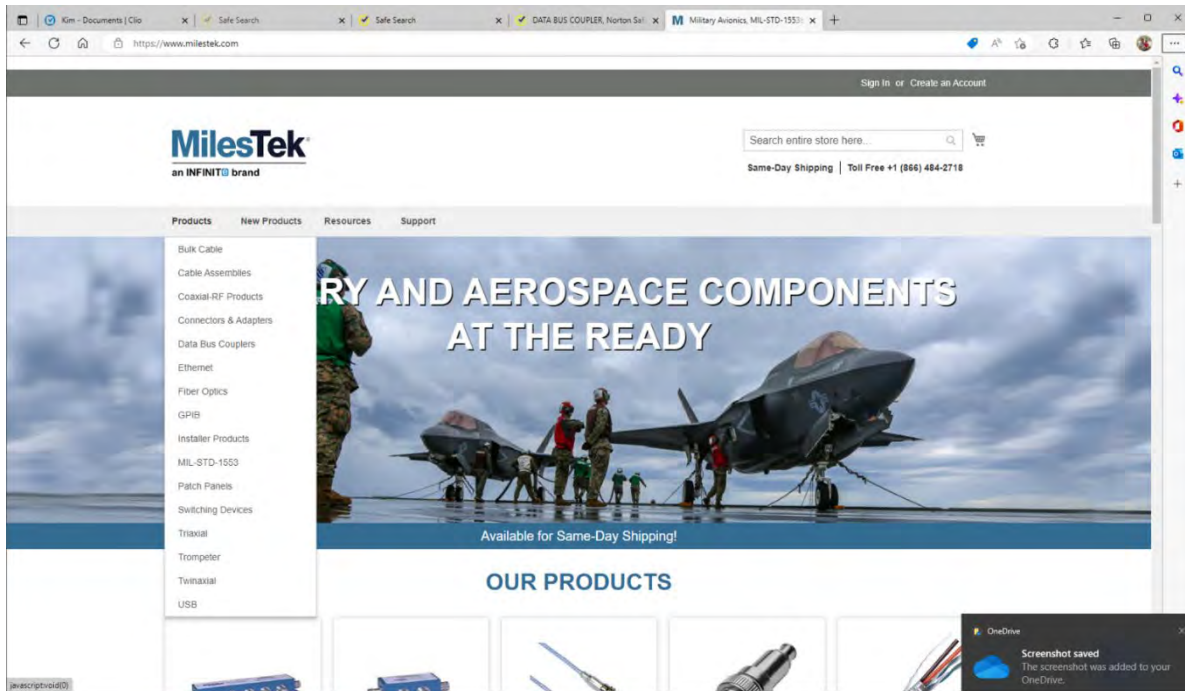


**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



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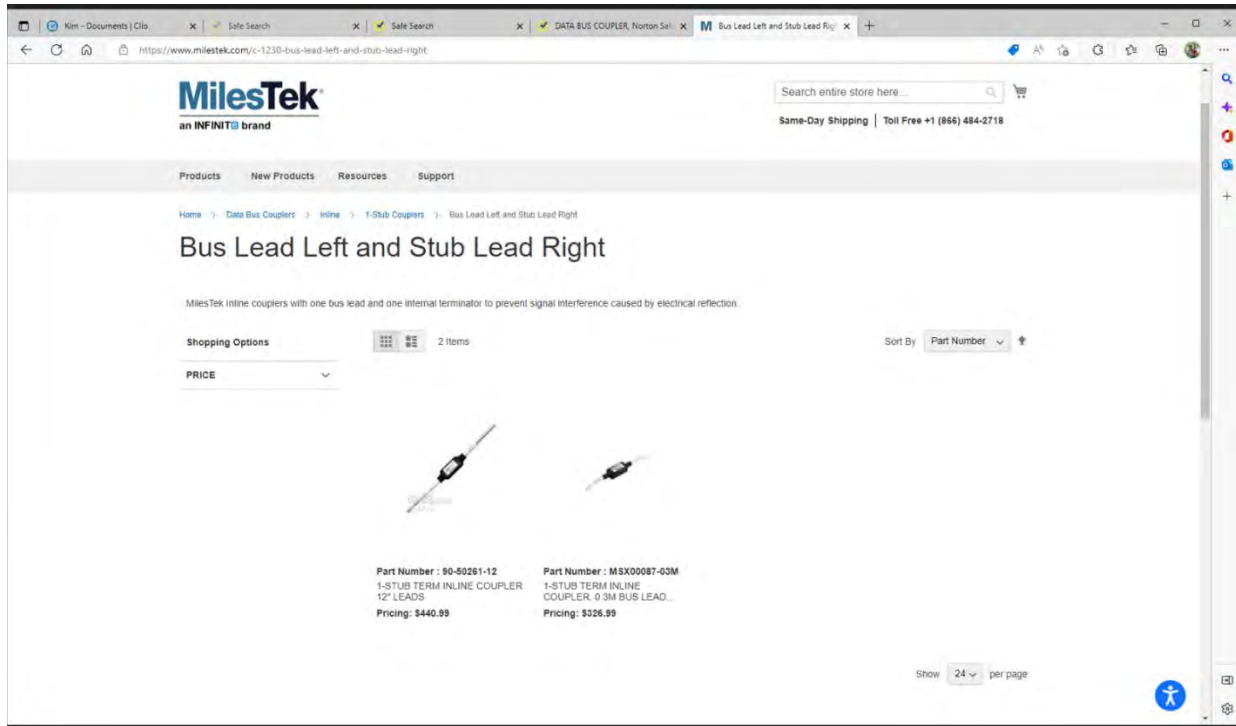
- 1 He continued to research for alternative parts, with the following results. Some intermedi-
- 2 ate screens are shown that display alternate part numbering.



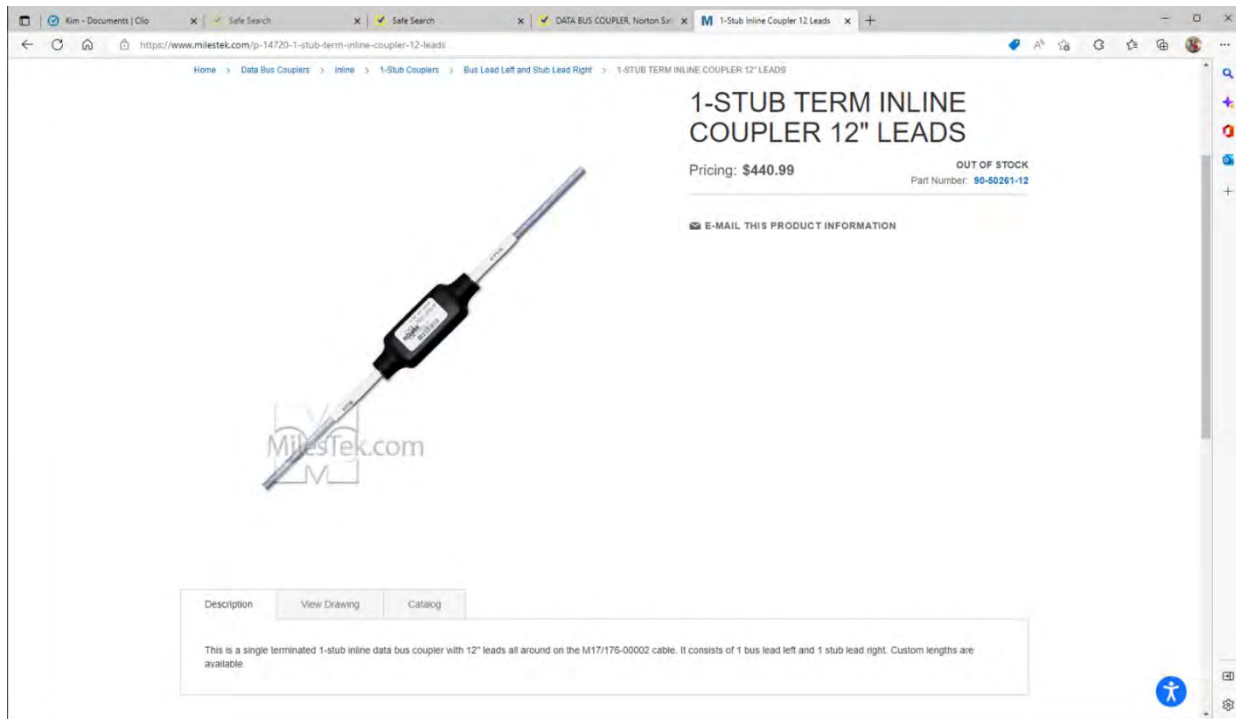
Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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1



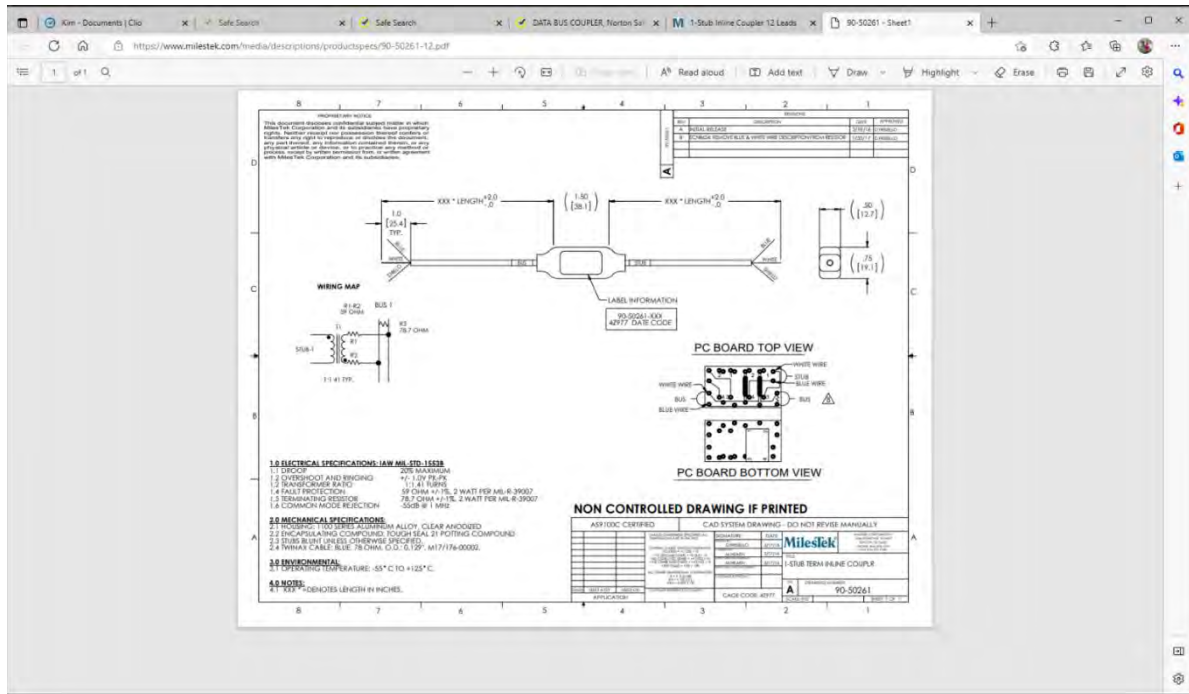
2

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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1 He also located a specification drawing.



2

3 That prompted him to request an alternate quote from a different supplier.

Robert Ayers, Project Manager, Norris Associates Technologies, LLC

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Q641516.pdf - Adobe Acrobat Reader (64-bit)

File Edit View Sign Window Help

Home Tools Q641516.pdf x

1 / 2 84%

**AeroBase Group** 3555 Agricultural Center Dr.  
Saint Augustine FL 32092  
www.aerobasegroup.com

**QUOTE #Q641516**  
Issued: 01/27/2023  
Account Manager: Ron Canniff  
Cust. Ref:

**Prepared For:**  
Norris Associates Technologies  
United States

**Contact Information:**  
rayers@norris-associates.com  
Phone:  
Fax:

Sales Rep: Ron Canniff Terms: Credit Card

Line	Part Requested	Part Quoted	Qty	Unit Price	Line Total
1.	DB12005-030 Qty: 1.00	No Quote Condition: Any Certs: Lead Time:	-	No Quote	No Quote
By accepting this quote, buyer and/or organization agree to the terms and conditions specified below. Email purchase order to: ron@aerobase.us					Total: \$0.00

Ron Canniff  
ron@aerobase.us  
Phone: 321-802-5889  
Fax: 321-733-7477  
Cage Code: 74B05  
[www.aerobasegroup.com](http://www.aerobasegroup.com)

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1

2 For those reasons we rated the 6<sup>th</sup> item on the sample list as **HARD**.



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1 **G. MESL MICROWAVE 10C 10416 S BAND HALF HEIGHT W [assumed to be a trun-**  
2 **cation of the word "WAVEGUIDE"], Master List Item 271**

3 This item could not ultimately be sourced.

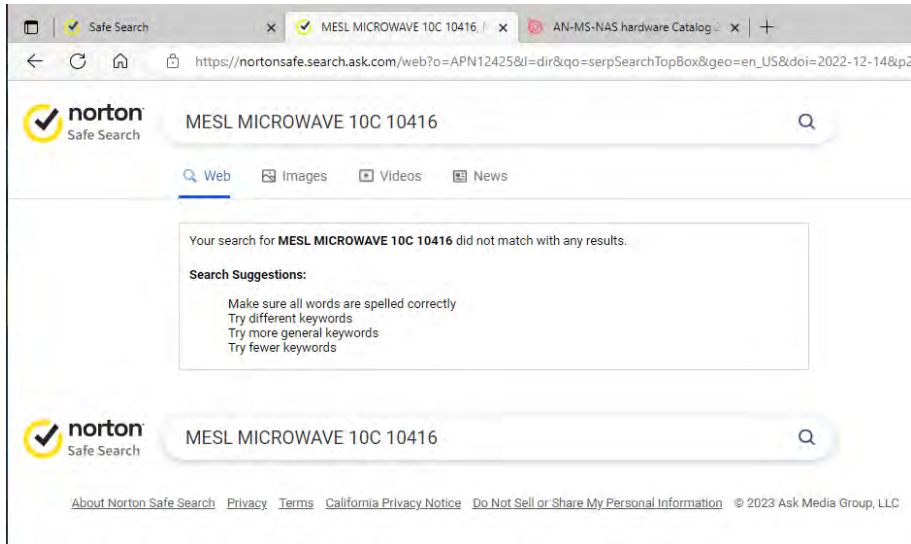
4 The manufacturer, MESL MICROWAVE, had been renamed COM DEV International and  
5 ultimately acquired by HONEYWELL.



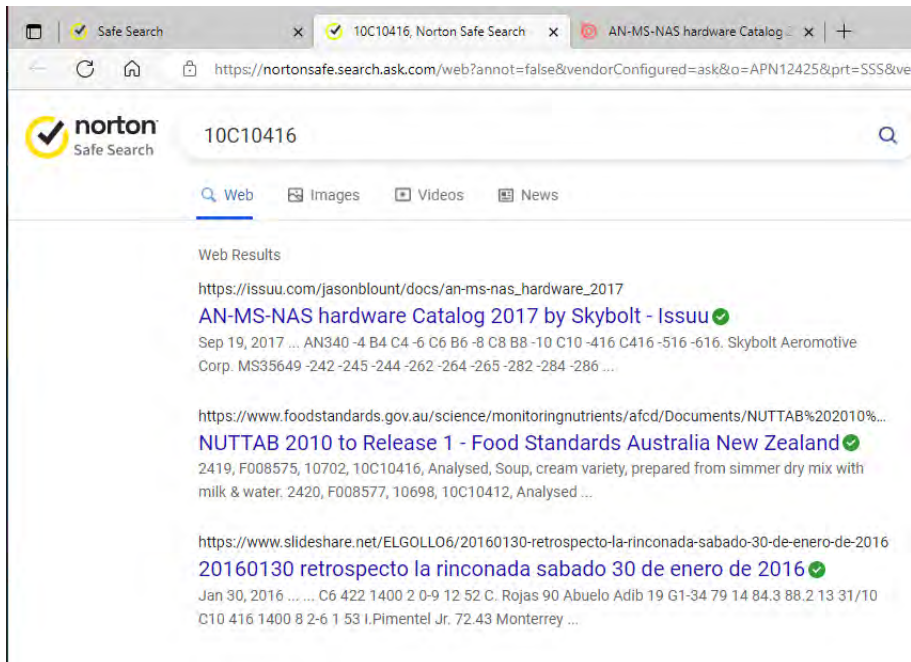
Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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1



2

3 The catalog referenced above is strictly for mechanical hardware and does not contain any  
4 electronics. The specified part number did not appear in any searches conducted.

5 For those reasons we initially rated the 7<sup>th</sup> item on the sample list as **HARD**. In Version 1  
6 of our report

7 With the expansion of our category list, this 7<sup>th</sup> item on the sample list now falls correctly  
8 into the category of **UNDETERMINED**.

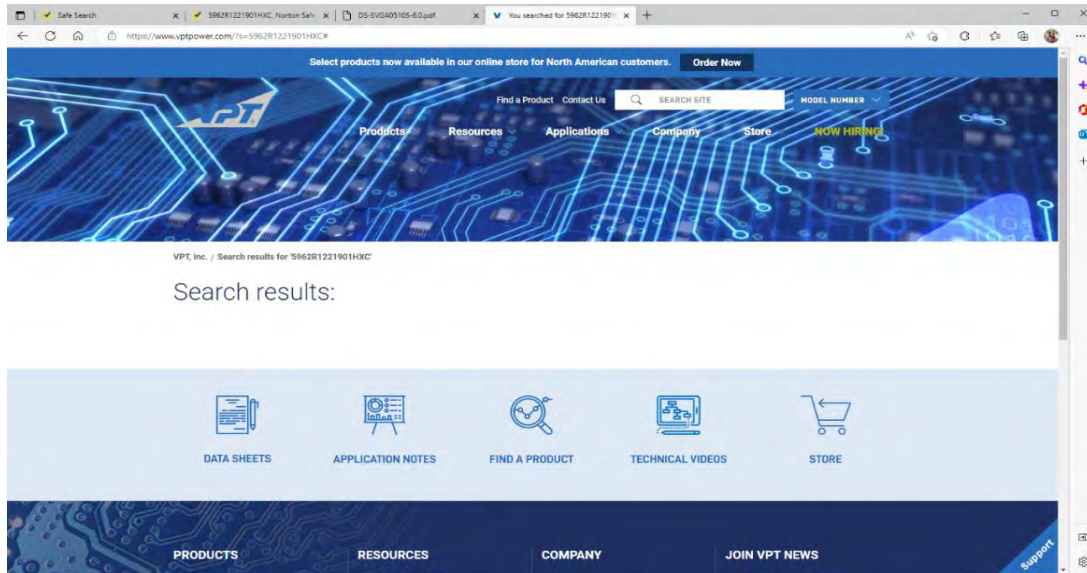
Robert Ayers, Project Manager, Norris Associates Technologies, LLC



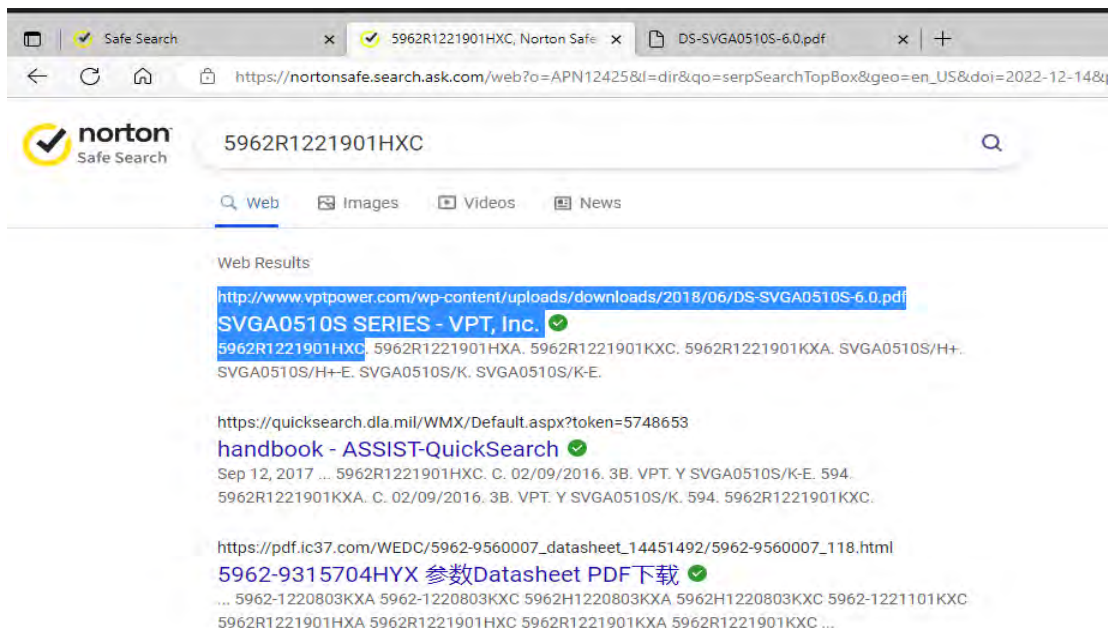
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H. VPT 5962R1221901HXC INTEGRATED CIRCUIT, DCDC CONVERTOR, Master List  
Item 283

Mr. Ayers' first finding was that **5962R1221901HXC** is not listed on the current VPT site.



Next, he noted that a search on **5962R1221901HXC** leads to a different part number.



He discovered that the apparently updated part number shown above is a “SPACE  
RATED” DCDC point of load converter.



Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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- 1
- 2 Notably, the original part specifications no longer seem to be available, but it would be rea-
- 3 sonable to assume that the specifications for the updated part, available as a PDF, are
- 4 Form-Fit-Function compatible, although this remains to be shown definitively.
- 5 For those reasons we rated the 8<sup>th</sup> item on the sample list as **MEDIUM**.

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



**Because Accuracy Matters™**

1 **I. VPT DVHF283R3S CONVERTOR DC/DC, Master List Item 288**

2 Mr. Ayers' first finding was that DVHF283R3S is not listed on the current VPT site. It was,  
3 however, listed on the site <https://www.datasheets360.com> and companion sites  
4 <https://www.datasheetpdf.com> and <https://www.findchips.com>.

Powered by GlobalSpec  
**Datasheets360**  
Enter Part #

Home > Analog and Digital ICs > Power Supply Modules > Part #: DVHF283R3S/H

**Part #: DVHF283R3S/H**  
Part Category: Other Semiconductors  
Manufacturer: VPT, Inc.  
Description: DC-DC Regulated Power Supply Module, 1 Output, 10W, Hybrid

**DVHF283R3S/H SPECIFICATIONS**

Mfr Package Description	PACKAGE-8
Status	Active
Analog IC - Other Type	DC-DC REGULATED POWER SUPPLY MODULE
Input Voltage-Nom	28.0 V
Input Voltage-Min	15.0 V

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Part Number	DVHF283R3S
Description	HIGH RELIABILITY HYBRID DC-DC CONVERTERS
Feature	DVHF2800S Series HIGH RELIABILITY HYBRID DC-DC CONVERTERS DESCRIPTION The DVHF series of high reliability DC-DC converters is operable over the full military (-55 °C to +125 °C) temperature range with no power derating. Unique to the DVHF series is a magnetic feedback circuit that is radiation immune. Operating at a nominal fixed frequency of 450 kHz, these regulated, isolated units utilize well controlled undervoltage lock out circuitry to eliminate slow start-up problems. These converters are designed and manufactured in a facility qualified to ISO9001 and certified to MIL-PRF-38534 and MIL-S.
Manufacture	Delta Electronics
Datasheet	<a href="#">Download DVHF283R3S Datasheet</a>

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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The screenshot shows the findchips.com website interface. At the top, there is a search bar with the text "DVHF283R3S" and a "Find" button. Below the search bar, there are tabs for "Part Search", "Parametric Search", and "Part Details". The "Part Details" tab is selected, showing the part name "DVHF283R3S" by VPT Inc. and its description: "DC-DC Regulated Power Supply Module, 1 Output, 10W, Hybrid, HERMETIC SEALED PACKAGE-8". There are buttons for "Set Alert", "Datasheets", and "Print This Page". Below this, there is a "Quick Jump" section with links for "CAD Models", "Part Data Attributes", and "Alternate Parts". The main content area is titled "Part Data Attributes" and contains a table with various attributes and their values. To the right of the table, there is a "Compare Parts" section with a dropdown menu to select a part to compare and a "Compare Parts" button.

Part Data Attributes	
Part Life Cycle Code	Active
Its Manufacturer	VPT INC
Part Package Code	MODULE
Package Description	HERMETIC SEALED PACKAGE-8
Pin Count	8
Reach Compliance Code	unknown
ECON Code	EAR99
HTS Code	8542.39.00.01
Analog IC - Other Type	DC-DC REGULATED POWER SUPPLY MODULE
Input Voltage-Max	59 V
Input Voltage-Min	15 V
Input Voltage-Nom	28 V
JESD-30 Code	R-XDPA-P8
Number of Functions	1
Number of Outputs	1
Number of Terminals	8
Operating Temperature-Max	125 °C
Operating Temperature-Min	-55 °C
Output Current-Max	3 A
Output Voltage-Max	3.35 V
Output Voltage-Min	3.25 V
Output Voltage-Nom	3.3 V
Package Body Material	UNSPECIFIED

1

2 A PDF specification is readily available for this part.

3 For those reasons we rated the 9<sup>th</sup> item on the sample list as **EASY.**

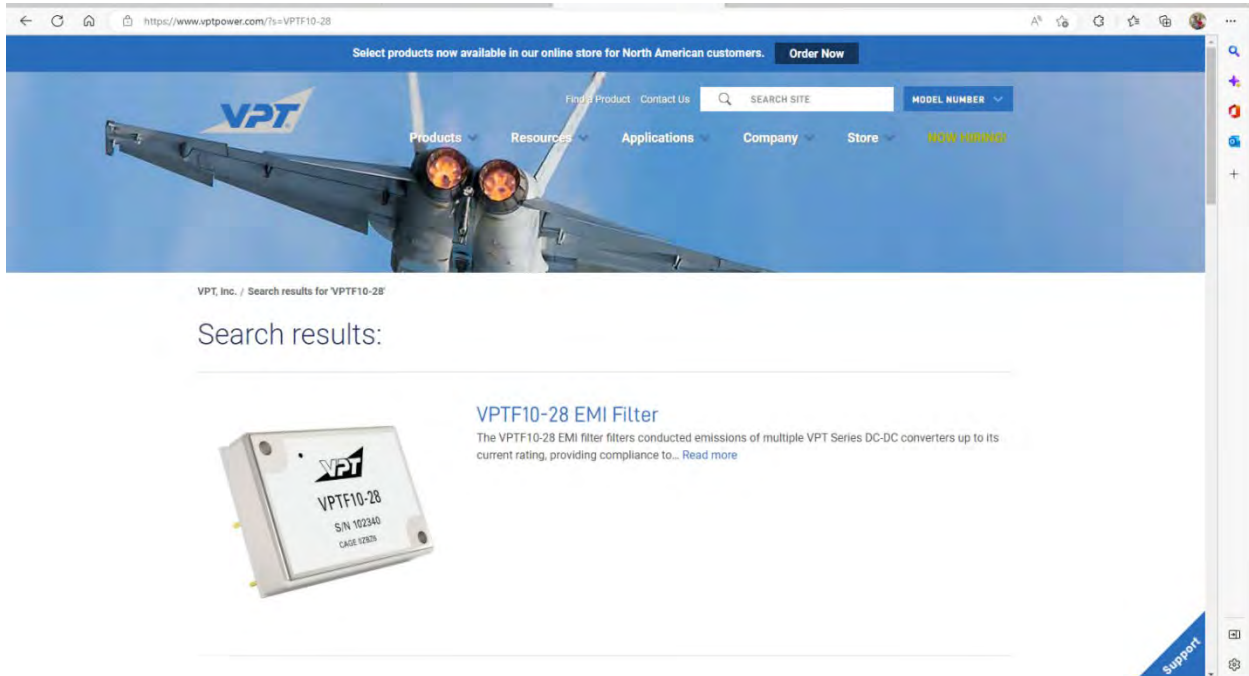
Robert Ayers, Project Manager, Norris Associates Technologies, LLC



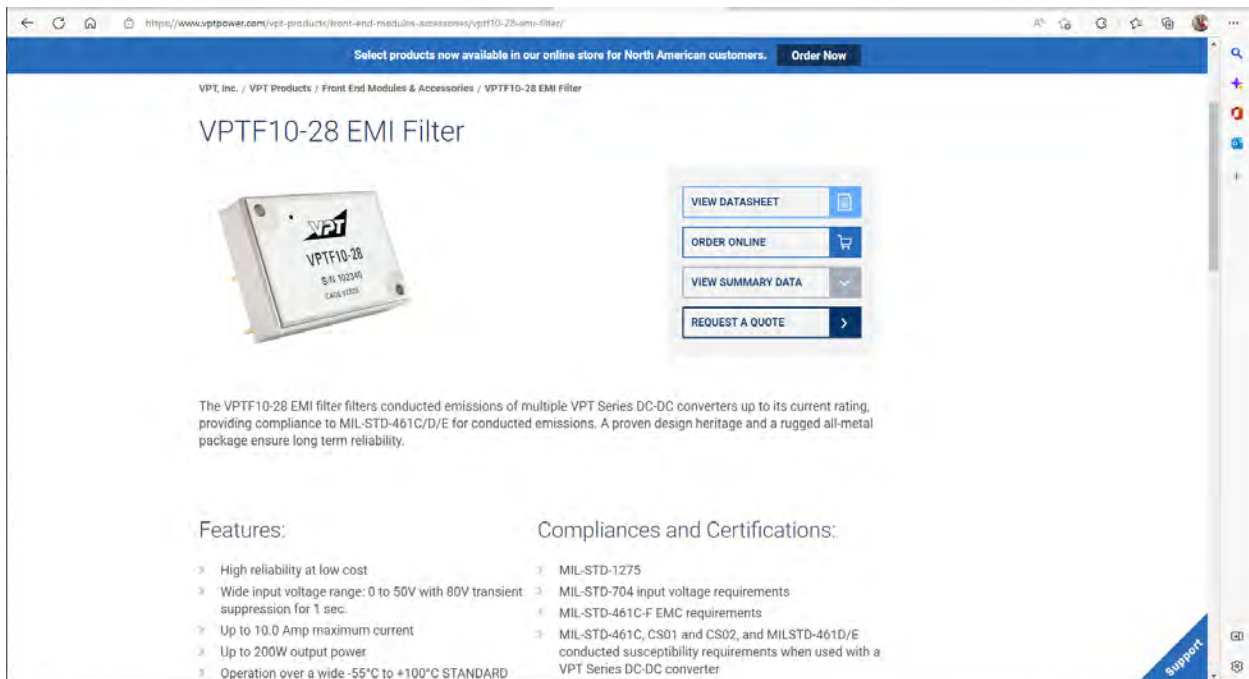
**Because Accuracy Matters™**

1 **J. VPT VPTF10-28 FILTER, Master List Item 302**

2 Mr. Ayers found this chip listed on the VPT website.



3



4



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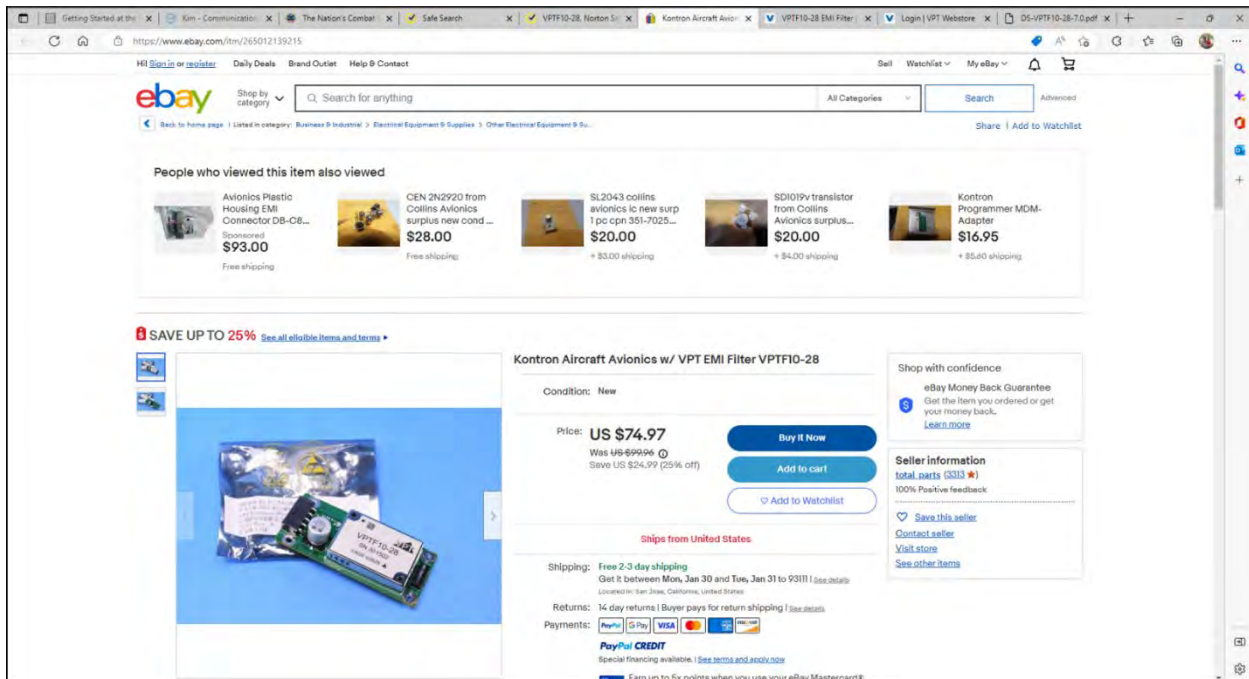
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1 He also found a PDF specification sheet.



2

3 He discovered that this exact part is available on eBay.

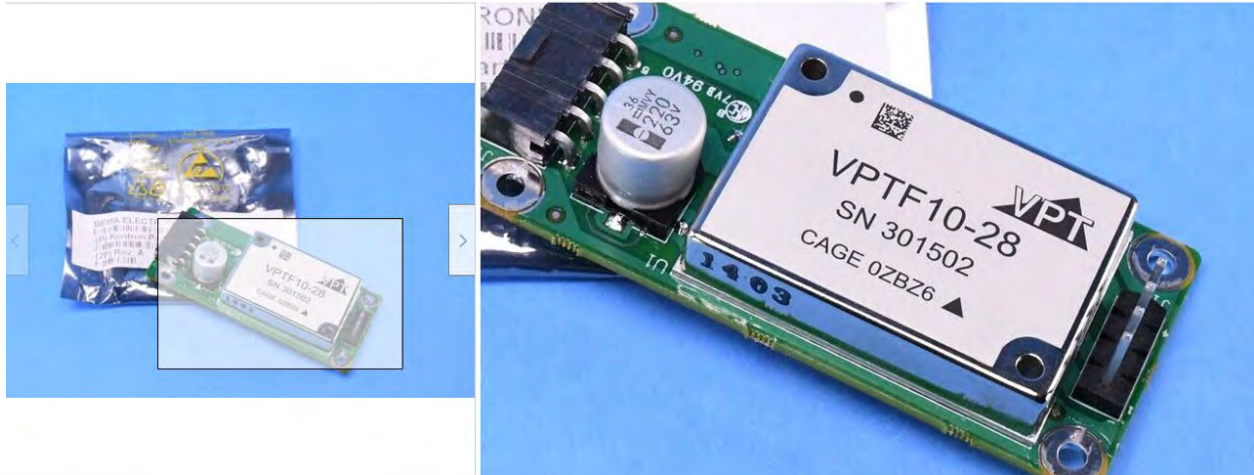


4

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1

2 For those reasons we rated the 10<sup>th</sup> item on the sample list as **EASY**.

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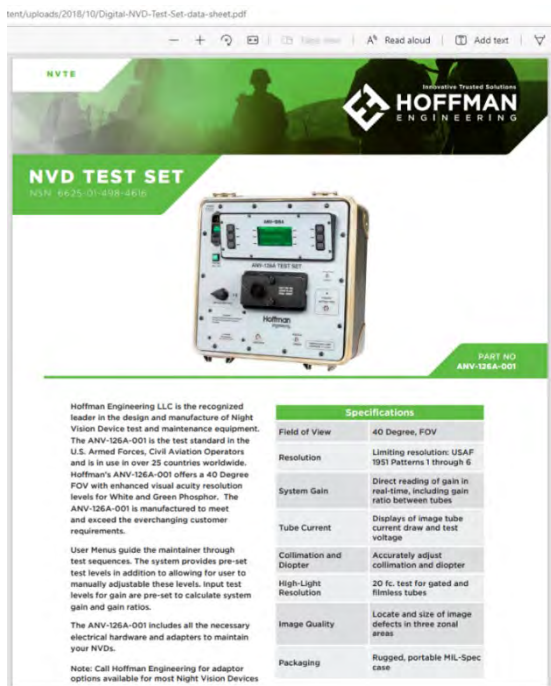
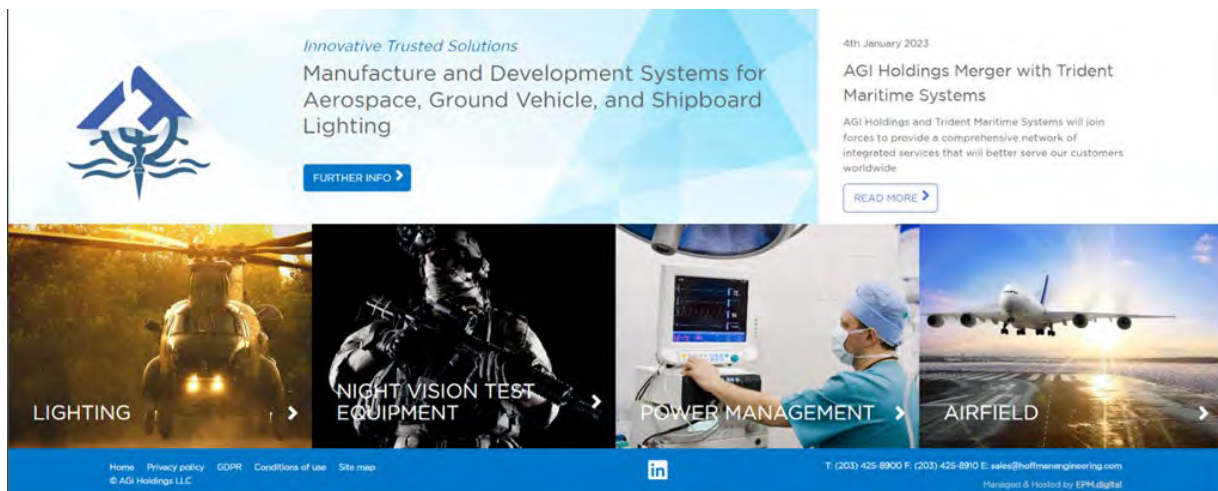


**Because Accuracy Matters™**

K. KNT ENGINEERING ANV-126A NIGHT VISION DEVICE calibration unit], Master  
List Item 305

L. KNT ENGINEERING ANV-126A-001 NIGHT VISION DEVICE [accessory kit]], Master  
List Item 306

Mr. Ayers found these Night Vision Devices sourced through KNT Engineering with an  
exclusive agreement with manufacturer Hoffman Engineering of Stamford, CT.

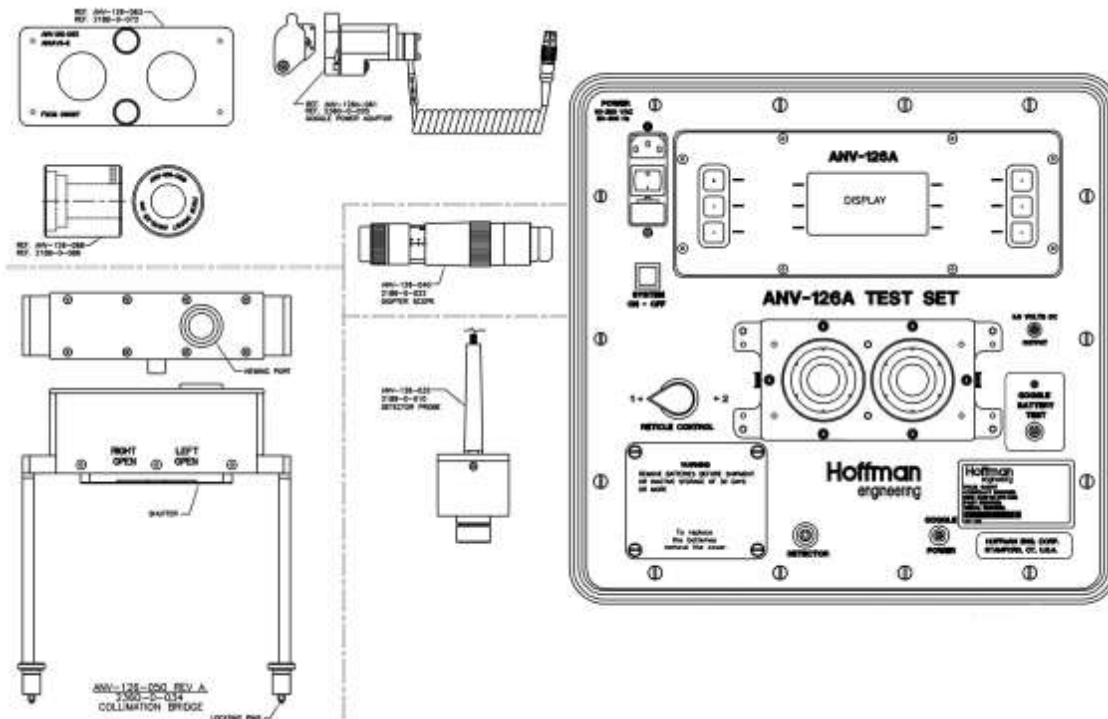




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1

2 They were listed for sale as shown.

<https://www.anrkydexholsters.com/test-equipment-tuesday-hoffman-engineering-anv-126a>

**Test Equipment Tuesday: Hoffman Engineering ANV-126a** ✓

Feb 23, 2022 ... The ANV-126a serves as the foundation for a manufacturers and maintainers processes providing objective standards to properly build, calibrate, ...

[https://aerobasegroup.com/part-number/ANV-126A-001\\_01-498-4616](https://aerobasegroup.com/part-number/ANV-126A-001_01-498-4616)

**ANV-126A-001 Night Vision Viewer Test Set | AeroBase Group, Inc.** ✓

Submit this form for current pricing and availability of this NSN. ... We do not share or sell your information to anyone. ... Historical pricing for this product ...

[https://aerobasegroup.com/part-number/anv-126-001\\_01-374-9681](https://aerobasegroup.com/part-number/anv-126-001_01-374-9681)

**ANV-126-001 Night Vision Viewer Test Set | AeroBase Group, Inc.** ✓

Historical pricing for this product is between 36822.5 and 48152.5 USD. Depending on quantity, availability, condition, lead time, and possible discontinuation ...

[https://www.dacis.com/budget/budget\\_pdf/FY06/PROC/F/842140.pdf](https://www.dacis.com/budget/budget_pdf/FY06/PROC/F/842140.pdf)

**UNCLASSIFIED UNCLASSIFIED** ✓

Test Set, Infrared Viewer - ANV-126A. The ANV-126A is a commercial upgrade and replacement of the ANV-126. It is suitable for both field.

3

4 For these reasons we rated the 11<sup>th</sup> item on the sample list as **EASY**.

5 For these reasons we rated the 12<sup>th</sup> item on the sample list as **EASY**.

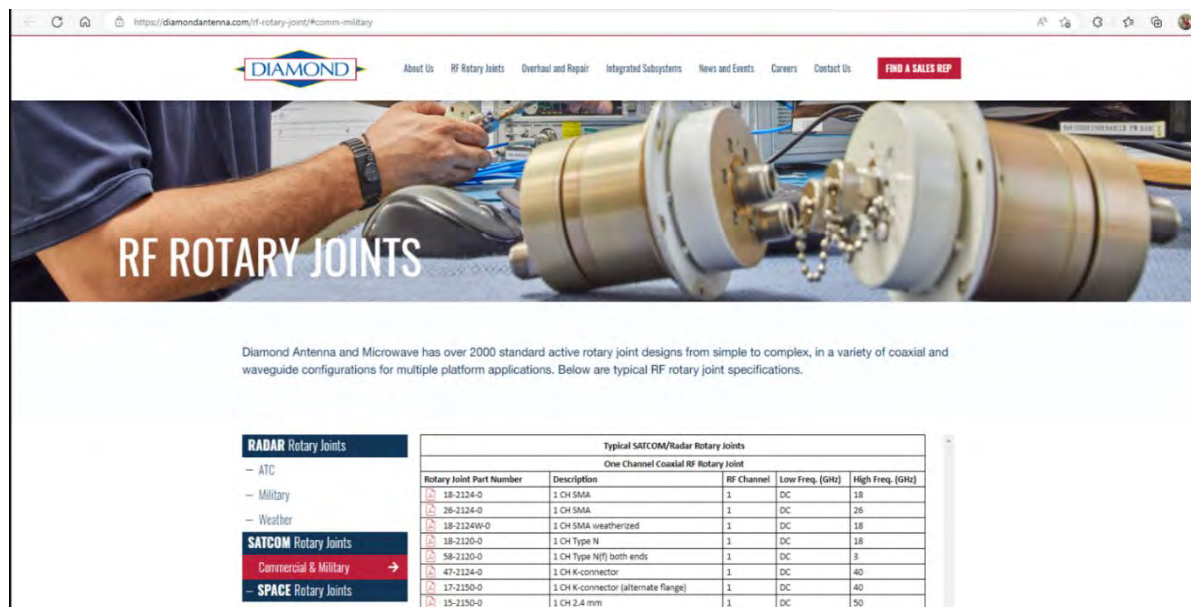
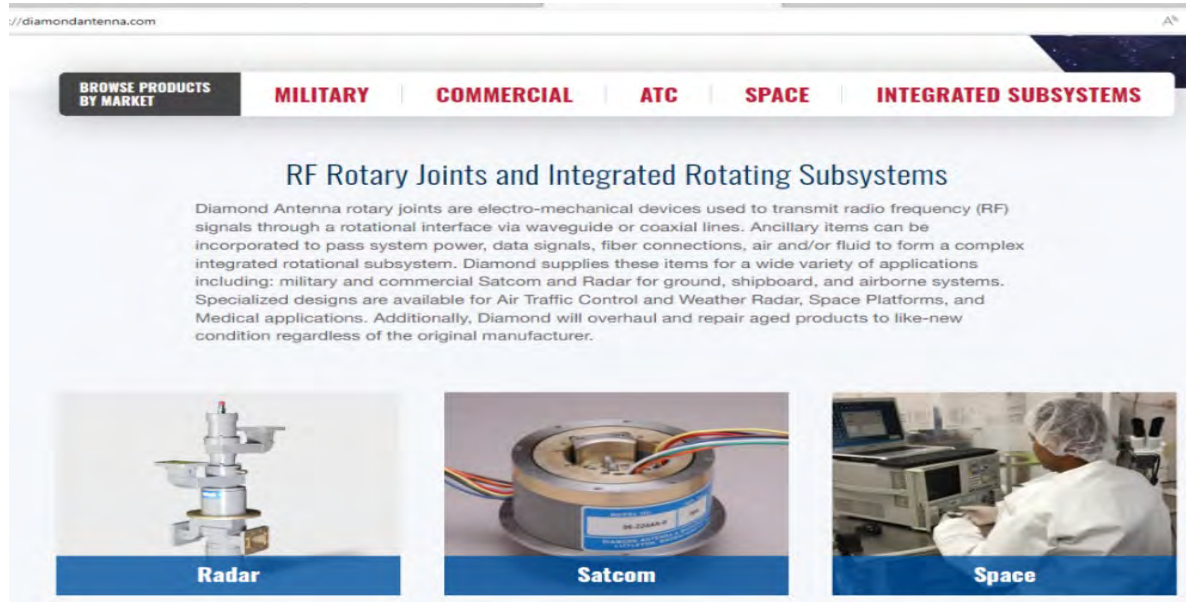


Robert Ayers, Project Manager, Norris Associates Technologies, LLC



***Because Accuracy Matters™***

- 1 **M. DIAMOND MICROWAVE 18-2124 ROTARY JOINT, Master List Item 331**
- 2 Mr. Ayers found this unit fully specified and possibly listed for sale on EverythingRF.com.



Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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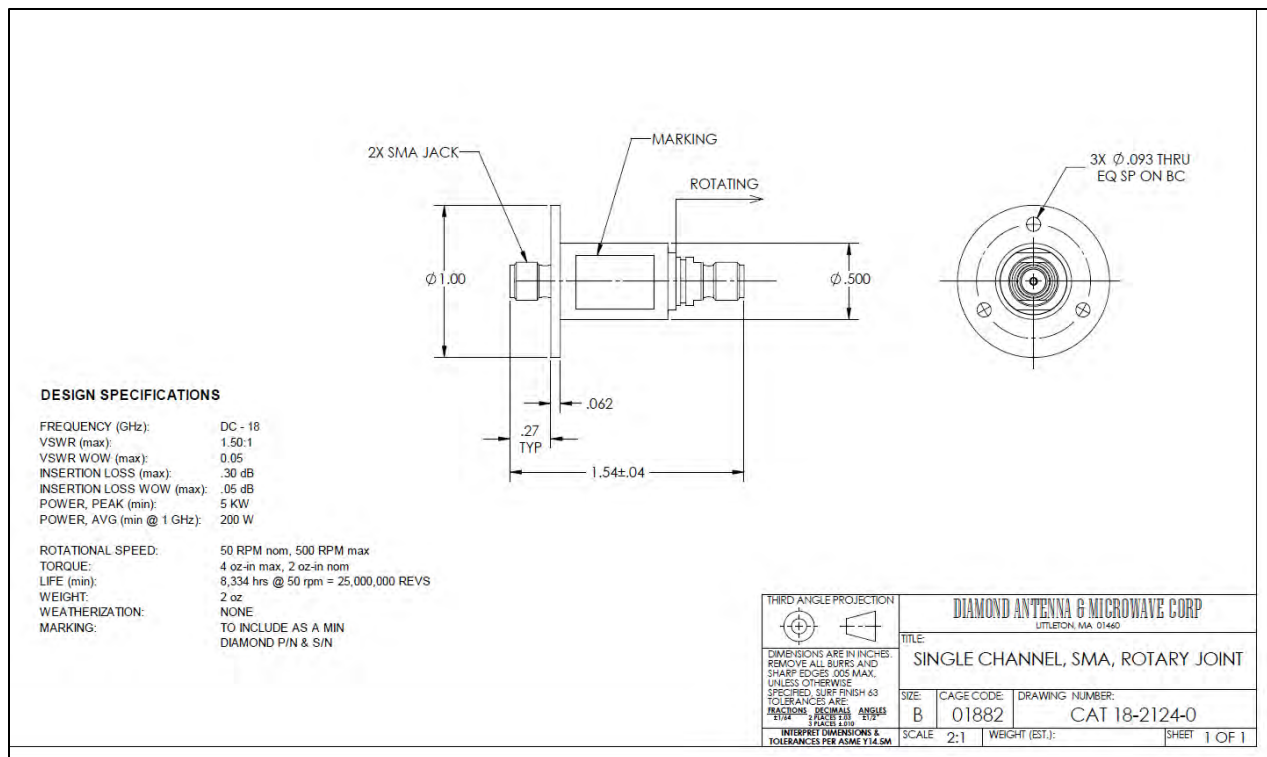


**Model 18-2124-0**

**COAX - 1 Channel**

Number of Channels	CH #	Frequency Low (GHz)	Frequency High (GHz)	Insertion Loss (dB)	IL WOW (dB)	VSWR (ratio)	VSWR WOW (dB)	Peak Power	Average Power	Input	Style
1	1	DC	18	0.3	0.05	1.50:1	0.05	5 KW	200 W @ 1 GHz	SMA (F)	COAX

1



2

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The screenshot shows the website <https://www.everythingrf.com/products/rf-rotary-joints/diamond-antenna-and-microwave-corporation/849-1560-18-2124-0>. The page features a navigation bar with categories like 5G, Wireless Infra, Aerospace & Defense, Satellite, Test & Measurement, GaN, GNSS, IOT, RFID, and Waveguides. The main content area displays the product 18-2124-0, a Coaxial Rotary Joint by Diamond Antenna and Microwave Corporation. The product description states: "The 18-2124-0 from Diamond Antenna and Microwave Corporation is a Coaxial Rotary Joint with Frequency DC to 18 GHz, Average Power 200 W, Peak Power 5 kW, Insertion Loss 0.30 dB. More details for 18-2124-0 can be seen below." The product specifications table is as follows:

Product Details	
Part Number	18-2124-0
Manufacturer	Diamond Antenna and Microwave Corporation
Description	Single Channel I Type Rotary Joint from DC to 18 GHz
General Parameters	
Style	I Type

Sidebars on the page include "PRECISION MADE EASY" banners for R&S MXO 4 Oscilloscope and "FEATURED PRODUCTS" section.

1

2 For these reasons we rated the 13<sup>th</sup> item on the sample list as **EASY**.

3

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1 **N. STEADFAST 520200105 TRANSISTOR, Master List Item 357**

2 Mr. Ayers found that this device is a replacement for an earlier superseded part, the  
3 2N2907AHR.

://www.datasheetq.com/datasheet-download/214946/1/ST-Microelectronics/520200105R

**520200105R Datasheet-ST-Microelectronics**


Part Name	Description	Manufacturer
520200105R	Hi-Rel 60 V, 0.6 A PNP transistor	 STMicroelectronics

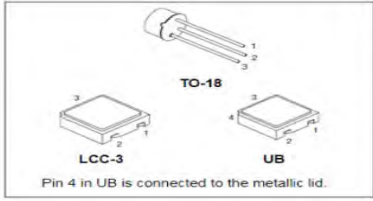
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**DuraMate Environmentally Sealed Plastic & Metal Connectors**  
Quick-connect, IP68/IP69k Protection



**Multi-Key**  
AUTHORIZED DISTRIBUTOR  
Schedule Shipments

 **2N2907AHR**  
Hi-Rel 60 V, 0.6 A PNP transistor  
Datasheet - production data



TO-18

LCC-3

UB

Pin 4 in UB is connected to the metallic lid.

**Features**

Parameter	Value
$BV_{CEO}$	60 V
$I_C$ (max)	0.6 A
$H_{FE}$ at 10 V - 150 mA	> 100

- Hermetic packages
- ESCC and JANS qualified
- European preferred part list EPPL

**Description**

Figure 1. Internal schematic diagram

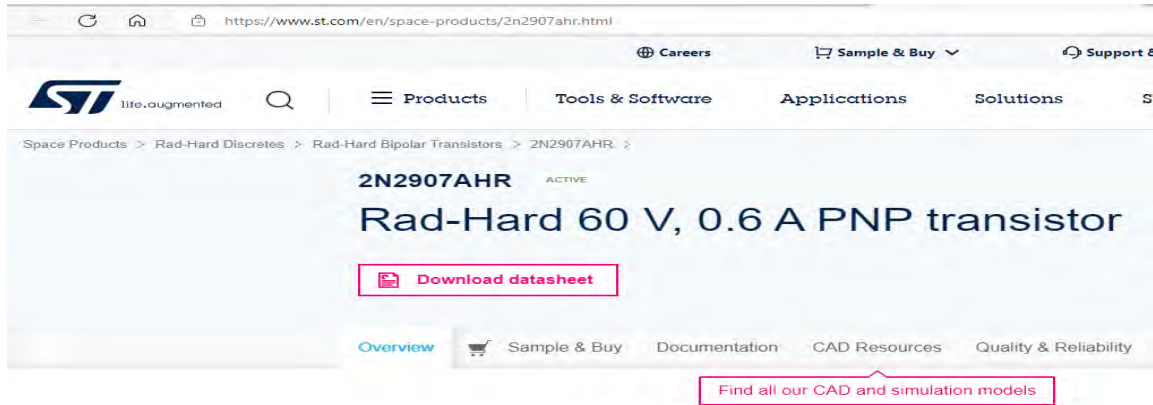
4



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## Product overview

Description All features Featured Videos

### Description

The 2N2907AHR is a bipolar transistor able to operate under severe environment conditions and radiation dose (TID).

Qualified as per ESCC 5202/001 specification and available in LCC-3 and UB hermetic packages, it harsh environment applications and suitable for low current and high precision circuits such preamp

- 1
- 2 The updated part seems to be available from Sierra IC, Inc., although this was not verified
- 3 as of this writing,

//www.sierraic.com/2n2907?gclid=EAIaIQobChMlrJ-rg-rt\_AIVuAitBh1tHw7cEAAAYASAAEKMn\_D\_BwE

Sierra IC Inc

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ENTER PART NUMBER / KEYWORDS

» HOME » BUY\_ONLINE » PARTS » PRODUCTS UNCATEGORIZED » GP-BJT » 2N2907

### 2N2907 Inventory Results

Datasheet Cross Reference RoHS Compliant Non-RoHS-Compliant

Part Number	Manufacturer	Quantity	Price	Availability	Order	Request Quote			
<input type="checkbox"/> 2N2907A-BP	MICRO COMMERCIAL COMP	203	Requires Quote	Available	0	REQUEST QUOTE			
Amplifier Transistor PNP Silicon									
<input type="checkbox"/> 2N2907AC1B	TT-ELECTRONICS	Requires Quote	Requires Quote	Available	0	REQUEST QUOTE			
BIPOLAR SMALL SIGNAL									
<input type="checkbox"/> 2N2907ACSM-JQRS	TT-ELECTRONICS	Requires Quote	Requires Quote	Available	0	REQUEST QUOTE			
<input type="checkbox"/> 2N2907AE3	MICROCHIP	Requires Quote	Requires Quote	Available	0	REQUEST QUOTE			
<input type="checkbox"/> 2N2907AE4	MICROCHIP	Requires Quote	Requires Quote	Available	0	REQUEST QUOTE			
<input type="checkbox"/> 2N2907AJAN-TR	MICROCHIP	Requires Quote	Requires Quote	Available	0	REQUEST QUOTE			
<input type="checkbox"/> 2N2907AJANTX-TR	MICROCHIP	Requires Quote	Requires Quote	Available	0	REQUEST QUOTE			
<input type="checkbox"/> 2N2907AJANTXV-TR	MICROCHIP	Requires Quote	Requires Quote	Available	0	REQUEST QUOTE			
<input type="checkbox"/> 2N2907ALJAN	NEW ENGLAND SEMICONDUCTOR	Requires Quote	Requires Quote	Available	0	REQUEST QUOTE			
BJT PNP Small Signal Transistor IC 0.6A									
<input type="checkbox"/> 2N2907ALJAN-TR	MICROCHIP	Requires Quote	Requires Quote	Available	0	REQUEST QUOTE			
<input type="checkbox"/> 2N2907ALJVJANTXV	SEMICOA	Requires Quote	Requires Quote	Available	0	REQUEST QUOTE			

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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s://www.sierraic.com/2n2907?gclid=EAlaIqobChMlrJ-rg-rt\_AIVuAitBh1tHw7cEAYASAAEgKMn\_D\_BwE

<input type="checkbox"/>	2N2907ALJVJANTXV	SEMICOA	Requires Quote	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907A-PBFREE	CENTRAL-SEMICONDUCTOR-CORP	Requires Quote	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907AQCSM	TT-ELECTRONICS	Requires Quote	Requires Quote	Available	0	REQUEST QUOTE	
<i>Quad High Speed, Medium Power PNP Switching Transistor in a Hermetically Sealed Ceramic Surface Mount Package for High Reliability Applications</i>								
<input type="checkbox"/>	2N2907ARHRT	ST MICROELECTRONICS	Requires Quote	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907ARUBG	ST MICROELECTRONICS	Requires Quote	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907ARUBT	ST MICROELECTRONICS	Requires Quote	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907A-TIN-LEAD	CENTRAL-SEMI	Requires Quote	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907A-TR	MICROCHIP	Requires Quote	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907/3	ORIGINAL EQUIPMENT MANUFACTURER	40	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907 326	ORIGINAL EQUIPMENT MANUFACTURER	390	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907603	ORIGINAL EQUIPMENT MANUFACTURER	22	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907A/1	SV	1457	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907A2	ORIGINAL EQUIPMENT MANUFACTURER	66	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907A/2N2222A	ORIGINAL EQUIPMENT MANUFACTURER	1176	Requires Quote	Available	0	REQUEST QUOTE	

1

s://www.sierraic.com/2n2907?gclid=EAlaIqobChMlrJ-rg-rt\_AIVuAitBh1tHw7cEAYASAAEgKMn\_D\_BwE

		EQUIPMENT MANUFACTURER		Quote			QUOTE	
<input type="checkbox"/>	2N2907A/3	ORIGINAL EQUIPMENT MANUFACTURER	36	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907A 9206914 ROHS	FARNELL	1754	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907AA	ORIGINAL EQUIPMENT MANUFACTURER	19	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907AAT	MOTOROLA SEMICONDUCTORS	430	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907A B100150	MOTOROLA SEMICONDUCTORS	2790	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907A B110150	ON	817	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907A B110160	MOTOROLA SEMICONDUCTORS	140	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907A B130180	ON	41	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907A B300450	MOTOROLA SEMICONDUCTORS	2497	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907A B80130	MOTOROLA SEMICONDUCTORS	1850	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907AB/FBQ	MOT	31	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907ABTWN	ST MICROELECTRONICS	430	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907A CDIL	OEM	5017	Requires Quote	Available	0	REQUEST QUOTE	
<input type="checkbox"/>	2N2907ACECC	SEMELAB	772	Requires Quote	Available	0	REQUEST QUOTE	
<i>Bipolar PNP Device in a Hermetically Sealed TO18 Metal Package</i>								

2

3 For those reasons we rated the 14<sup>th</sup> item on the sample list as **MEDIUM**.

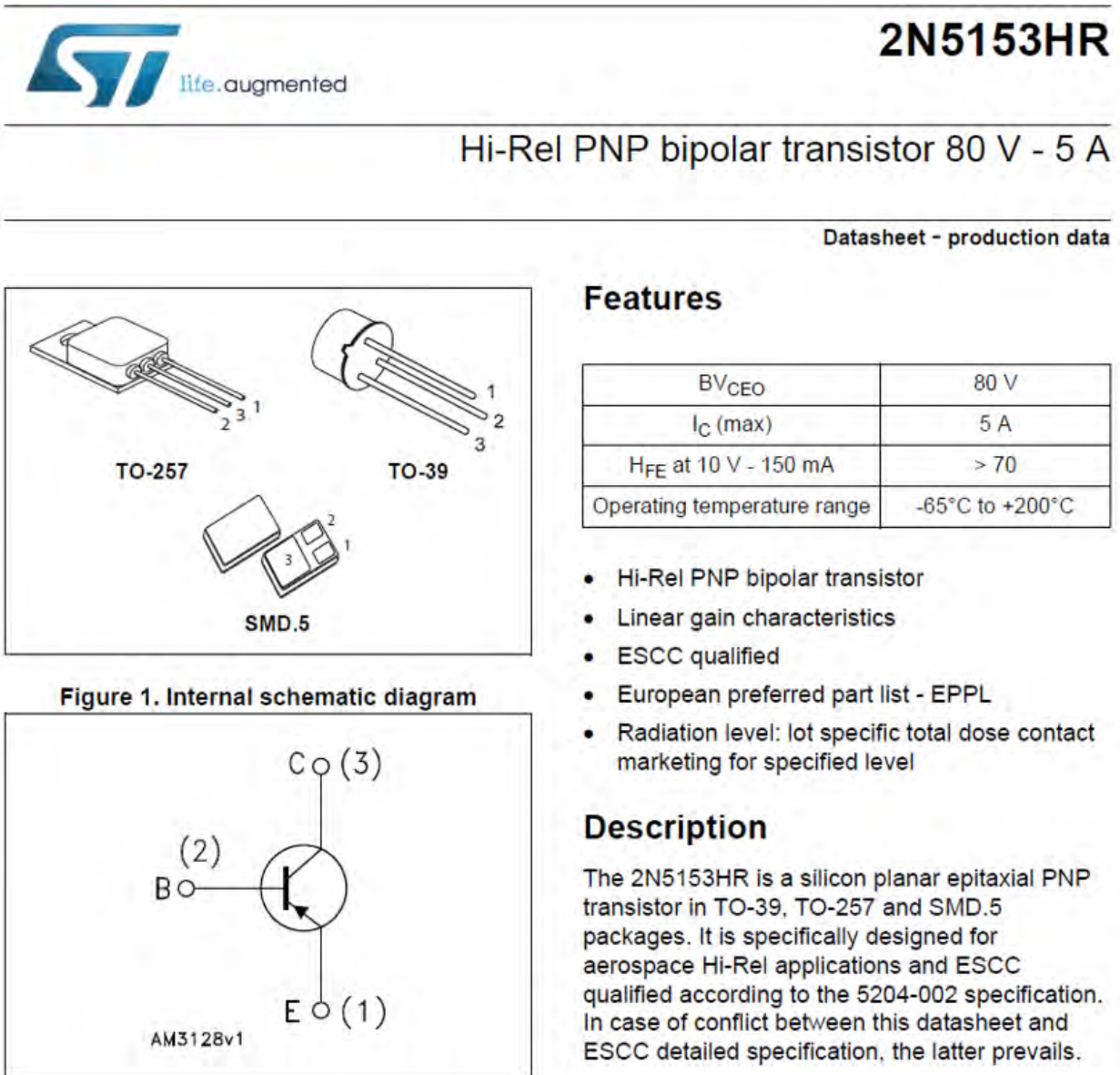
4

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



**Because Accuracy Matters™**

- 1 O. STEADFAST 2N5153RESYHRG TRANS GPT BJT PNP 80V, Master List Item 361
- 2 P. STEADFAST 2N5153RESYHRT TRANS GPT BJT PNP 80V, Master List Item 362
- 3 Mr. Ayers found a single data sheet covering both items.





Robert Ayers, Project Manager, Norris Associates Technologies, LLC



**Because Accuracy Matters™**

Table 1. Device summary

Device	Qualification system	Agency specification	Package	Other features	EPPL
2N5153RSHRG	ESCC	5204/002	SMD.5	Emitter on Pin 1 - 100 krad: ESCC LDR	Yes
2N5153SHRG	ESCC	5204/002	SMD.5	Emitter on Pin 1	Yes
2N5153RHRx	ESCC	5204/002	TO-39	100 krad: ESCC LDR	-
2N5153HRx	ESCC	5204/002	TO-39	-	-
2N5153RESYHRx	ESCC	5204/002	TO-257	100 krad : ESCC LDR	-
2N5153ESYHRx	ESCC	5204/002	TO-257	-	-

March 2014

DocID15386 Rev 5

1/17

This is information on a product in full production.

[www.st.com](http://www.st.com)

- 1
- 2 These items were listed by supplier AVNET, but inventory showed zero quantity in stock.
- 3 For these reasons we rated the 15<sup>th</sup> item on the sample list as **HARD**.
- 4 For these reasons we rated the 16<sup>th</sup> item on the sample list as **HARD**.

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



**Because Accuracy Matters™**

1 **Q. STEADFAST 5962F0252401VXC IC, Master List Item 372**

2 Mr. Ayers found multiple numbers assigned to what is apparently the same part. It is listed  
3 as available by AVNET, but we did not request a quote.

5962F0252401VXC

Rad-Hard Positive Voltage Regulator 1-Channel Adjustable 1.23V to 9V 2A Gold 16-Pin Flat-P SMD Strip Pack

Manufacturer: STMicroelectronics  
Product Category: Power Management, Voltage Regulators, LDO Regulators  
Avnet Manufacturer Part #: RHFL4913KPA-01V

Compare Datasheet

RoHS Non-Compliant NCNR Bulk: Lifecycle

0 - In Stock Refresh Stock

Additional Inventory  
Factory Lead Time - Constrained part. Lead time unavailable.

Notify Me When In-Stock

Quantity: Min: 20 Mult: 10 20

ADD TO BOM CLICK TO QUOTE

Descriptions

Rad-Hard Positive Voltage Regulator 1-Channel Adjustable 1.23V to 9V 2A Gold 16-Pin Flat-P SMD Strip Pack

ECCN / UNSPSC / COO

Description	Value
Country Of Origin:	France
ECCN:	EAR99
HTSN:	8542390001

ST MICRO ENGINEERING SAMPLE KIT  
FREE Standard Products sample kit  
CLAIM KIT

4

5962F0252401VXC

RHFL4913KPA-01V - STMicroelectronics

ESCC Family 08-52 MICROCIRCUITS - POWER MANAGEMENT - LINEAR REGULATOR

GENERAL DATA

Microcircuit, Linear, Positive, Adjustable, Low Dropout, Voltage Regulator, Monolithic Silicon

PART NUMBER: 5962F0252401VXC

PART TYPE: RHFL4913KPA-01V

MANUFACTURER: STMicroelectronics

QUALITY LEVEL: QML V

QUALIFICATION STATUS: Qualified

CERTIFICATION NUMBER: QPD05-38535 13-Oct-2022

EPPL: I

PACKAGE: CFP-16

PARAMETERS

Specific Functional & Electrical

I <sub>B</sub> (MAX) (BIASED CURRENT (MAX))	1mA
V <sub>IN</sub> (MIN) (INPUT VOLTAGE (MIN))	3V
V <sub>IN</sub> (MAX) (INPUT VOLTAGE (MAX))	12V
V <sub>DO</sub> (MAX) (DROPOUT VOLTAGE (MAX))	650mV @I <sub>DO</sub> =1A
I <sub>DO</sub> (MAX) (OUTPUT CURRENT (MAX))	2A
POLARITY	Positive
V <sub>OUT</sub> (MIN) (OUTPUT VOLTAGE (MIN))	1.23V
OUTPUT TYPE	Adjustable
V <sub>DO</sub> (MAX) (OUTPUT VOLTAGE (MAX))	9V

Mechanical Data

Radiation: Potential Sensitivity

EEE PARTS VALIDATION ACCORDING TO QUALITY PROJECT REQUIREMENTS

1. Select a project requirement to check the suitability of this component and delta activities needed if applicable:

ECSS-Q-ST-60C CLASS 1 ECSS-Q-ST-60C CLASS 2  
ECSS-Q-ST-60C CLASS 3 ATN PROPOSAL FOR LEO CONSTELLATIONS

ESTIMATED PRICES, LEAD TIMES AND STOCK AVAILABILITY

CLICK TO SEE ESTIMATED PRICE AND MANUFACTURER LEAD TIME FOR THIS REFERENCE

ALTER TECHNOLOGY LABORATORY SERVICES

2. Breakdown of proposed activities and estimated cost per selected procurement policy.

DOCUMENTATION

TYPE	REFERENCE	TITLE
Generic spec.	ML-PHF-38535	Integrated Circuits (Microcircuits) Manufacturing, General Specification For
Detailed spec.	9943-02524	Microcircuit, Linear, Positive, Adjustable, Low Dropout, Voltage Regulator, Monolithic Silicon
QPL/QML	QPD05-38535	Advanced Microcircuits

ADDITIONAL INFO

Radiation Information

Alerts & Product change

5

Robert Ayers, Project Manager, Norris Associates Technologies, LLC

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1

2

3

Mr. Ayers found the exact part in stock at Sierra IC Inc.

For those reasons we rated the 17<sup>th</sup> item on the sample list as **EASY**.

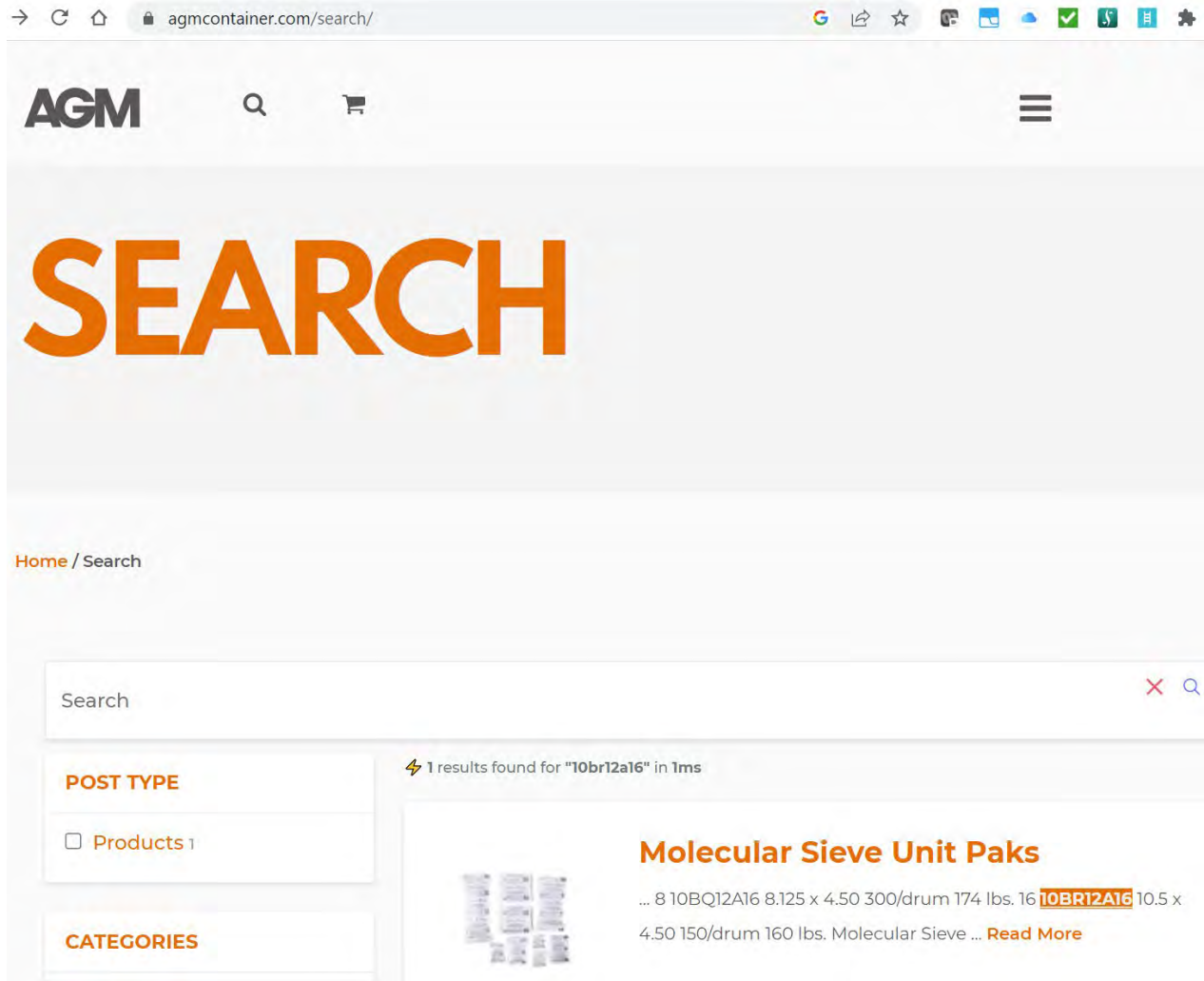
Robert Ayers, Project Manager, Norris Associates Technologies, LLC



**Because Accuracy Matters™**

1 R. **AGM CONTAINER CONTROLS 10BR12A16 SILICAGEL, Master List Item 766**

2 Mr. Norris found this product listed as a current item on the manufacturer's website.



3

4 The READ MORE links as follows:



Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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agmcontainer.com/product/molecular-sieve-unit-paks/

AGM PRODUCTS > KNOWLEDGE HUB > SERVICES ABOUT US BLOG CONTACT US

Home / Products / Moisture Control / Packaged Desiccant / Molecular Sieve / Molecular Sieve Unit Paks


## MOLECULAR SIEVE UNIT PAKS

SKU: MolecularSieveUnitPaks  
Categories: Moisture Control, Molecular Sieve, Packaged Desiccant

unit-size  
Choose an option

1

REQUEST A QUOTE



DESCRIPTION ADDITIONAL INFORMATION

Molecular Sieve Unit Paks				
Unit Size	AGM Part Number	Bag Size (Inches)	Bags Per Container	Container Weight
1/6	02BS12A13	2.125 x 2.125	1,200/ctn	19 lbs.
1/3	02BK12A13	2.50 x 2.125	700/pail	23 lbs.
1/2	02BL12A13	3.125 x 2.12	550/pail	28 lbs.
1	02BM12A16	4.50 x 3.0	1,800/drum	98 lbs.
2	02BN12A13	4.50 x 5.0	150/pail	22 lbs.
4	02BO12A16	6.0 x 5.0	500/drum	138 lbs.
8	10BQ12A16	8.125 x 4.50	300/drum	174 lbs.
16	10BR12A16	10.5 x 4.50	150/drum	160 lbs.

Molecular Sieve Unit Paks are available in a variety of sizes and quantities and are housed in a Tyvek® substrate.

Molecular Sieve is the most aggressive and expensive desiccant and comprised of a manufactured crystalline version of zeolite containing a network of uniform pores and empty cavities. Tyvek® is extremely strong and hard to tear, non-dusting and has superior print quality.

These Molecular Sieve Unit Paks meet Mil Spec 3464 Type I & II, as well as FDA approved for direct food contact and can be used in a wide range of industries from military/government to consumer applications.

Available in a variety of quantities and sizes, the term "unit" is a quantity of desiccant, which will absorb a set percentage of its weight at certain levels of humidity.

1

2 For these reasons we rated the 18<sup>th</sup> item on the sample list as **EASY**.

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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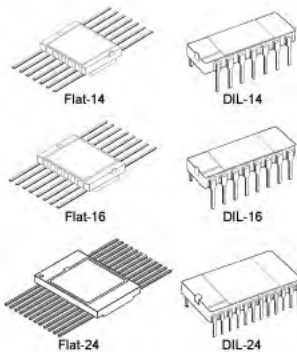
- 1 S. **STEADFAST 920204602(HCC4050BKT) INTERGRATED CIRCUIT (IC), Master List**
- 2 **Item 389**
- 3 Mr. Ayers was able to locate the Data Sheet for the exact listed item.



HCC40xxx, HCC45xxx

Datasheet

Rad-hard, high voltage, CMOS logic series



The upper metallic lid is not electrically connected to any pins, nor to the IC die inside the package

#### Features

- ESCC qualified
- 18 V Absolute maximum ratings
- 3 V to 15 V operating voltage
- Hermetic packages
- Rad-hard 100 krad (Si) TID
- SEL immune up to 119 MeV.cm<sup>2</sup>/mg
- SEU immune up to 119 MeV.cm<sup>2</sup>/mg
- -55 °C to +125 °C temperature range
- ESCC specification available on ESCC website for each part

#### Description

The HCC40xxx and HCC45xxx series are composed of high-voltage CMOS functions, offering a set of highly noise tolerant gates, Flip-Flops, multiplexers, counters, bus interfaces, and several other functions. The radiation hardness, single event latch-up (SEL), single event upset (SEU) immunity, and the housing in hermetic packages of all types of both series make them usable in the most difficult environmental conditions. They are all qualified and tested over -55 °C to +125 °C ambient temperature range. The complete specification of each type is available from the ESCC (European Space Components Coordination) web site: <https://escies.org> using its ESCC part number. STMicroelectronics® guarantees full compliance of qualified parts with these ESCC specifications.

Product status link

HCC40xxx, HCC45xxx

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



**Because Accuracy Matters™**

DS6709 - Rev 8 - November 2020

For further information contact your local STMicroelectronics sales office.

www.st.com

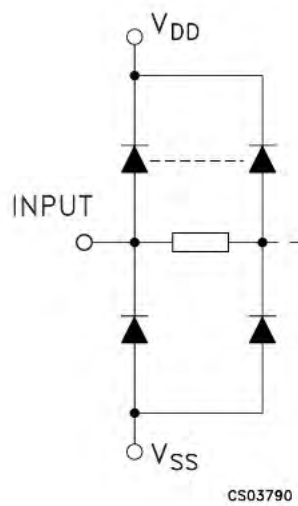


HCC40xxx, HCC45xxx  
Input equivalent circuit diagram

1

## Input equivalent circuit diagram

Figure 1. Input equivalent circuit diagram



Note: For the HCC4019B and the HCC4050B input equivalent circuit, there is no diode connected to VCC.

DOCEET 2.0

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CATEGORIES Part number or reference (55A009)

ACTIVE CART DCL / BOM COMPARE ...

BACK TO SEARCH

92004602  
HCC4050BKT - STMicroelectronics  
ESCC Family 08 - 80 MICROCIRCUITS > DIGITAL > LOGIC > GATES

GENERAL DATA

CMOS Hex Buffer/Converter Non-inverting, based on type 4050B

PART NUMBER: 92004602

PART TYPE: HCC4050BKT

MANUFACTURER: STMicroelectronics

QUALITY LEVEL: ESCC

QUALIFICATION STATUS: Qualified

DISTRIBUTION NUMBER: 731

WPL: 1

PACKAGE: CDF-16

PARAMETERS

Specific Functional & Electrical

INPUT COMPATIBILITY: CMOS

OUTPUT COMATIBILITY: CMOS

MAXIMUMS (NUMBER OF CIRCUITS): 5

INPUTS (NUMBER OF INPUTS): 1 Input

OUTPUTS (NUMBER OF OUTPUTS): 6

Mechanical Data

Radiation: Potential Sensitivity

Radiation Features: SEE

ESSE PARTS VALIDATION ACCORDING TO QUALITY PROJECT REQUIREMENTS

1. Select a project requirement to check the suitability of this component and delta activities needed if applicable:

ECSS-Q-ST-40C CLASS 1 ECSS-Q-ST-40C CLASS 2

ECSS-Q-ST-40C CLASS 3 ATM PROPOSAL FOR LED CONSTELLATIONS

ESTIMATED PRICES, LEAD TIMES AND STOCK AVAILABILITY

STOCK

CLICK TO SEE ESTIMATED PRICE AND MANUFACTURER LEAD TIME FOR THIS REFERENCE

ALTER TECHNOLOGY LABORATORY SERVICES

2. Breakdown of proposed activities and estimated cost per selected procurement policy.

DOCUMENTATION

TYPE REFERENCE TITLE

Generic spec: ESCC 9000 Generic Specification for Integrated Circuits: Monolithic And Multichip Microcircuits, Wire-Bonded, Hermetically Sealed And Flip-Chip Monolithic Micro-

Detailed spec: ESCC 9202/046 CMOS Hex Buffer/Converter Non-Inverting, based on type 4050B

QPL/QML: ESCC QPL ESCC Qualified Part List

ADDITIONAL INFO

Alerts & Product change

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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### Sample & Buy

Part Number	Order from distributors	Order from ST	Marketing Status	ECCN (US)	ECCN (EU)	Packing Type	Package
HCC4050BKG	No availability of distributors reported, please contact our sales office		NRND	EAR99	NEC	Carrier Tape	Flat-16E
HCC4050BKT	Available at 1 distributors		ACTIVE	EAR99	NEC	Carrier Tape	Flat-16E
HCC4050BDG	No availability of distributors reported, please contact our sales office		ACTIVE	EAR99	NEC	Carrier Tape	DIL-16
HCC4050BK1	No availability of distributors reported, please contact our sales office		NRND	EAR99	NEC	Carrier Tape	Flat-16E

(\*) Suggested Resale Price (USD) per defined quantity (for BUDGETARY USE ONLY. For quotes, prices in local currency, please contact your local ST Sales Office or our Distributors.

1

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### Sample & Buy

Part Number	Order from distributors	Order from ST	Marketing Status	ECCN (US)	ECCN (EU)	Packing Type	Package
HCC4050BKG	No availability of distributors reported, please contact our sales office		NRND	EAR99	NEC	Carrier Tape	Flat-16E
HCC4050BKT	Available at 1 distributors		ACTIVE	EAR99	NEC	Carrier Tape	Flat-16E

Distributor availability of HCC4050BKT

Distributor Name	Region	Stock	Min. Order	Third party link
AVNET	AMERICA	7	0	<a href="#">Buy from Distributor</a>

Distributor reported inventory date: 5/11/2023

Part Number	Order from distributors	Order from ST	Marketing Status	ECCN (US)	ECCN (EU)	Packing Type	Package
HCC4050BDG	No availability of distributors reported, please contact our sales office		ACTIVE	EAR99	NEC	Carrier Tape	DIL-16



Robert Ayers, Project Manager, Norris Associates Technologies, LLC

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Showing 2 products

Filters Category: Buffers & Line Drivers CLEAR ALL

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TOOLTIP EMAIL DOWNLOAD Switch to Attribute View

PRODUCT	PRICE	AVAILABILITY	INFORMATION	MANUFACTURER
<b>HCC4050BKT</b> STMMicroelectronics HCC40 Rad-Hard Hex Non-Inverting Buffer/Converter CMOS 3V1... More Add to BOM Datasheet Lifecycle Compare Avnet Manufacturer Part #: HCC4050BKT	Min: 25 Max: 10 25 CLICK TO QUOTE	0 - In Stock Additional Inventory Factory lead time - Constrained part. Lead time unavailable Notify Me When In Stock	RoHS Non-Compliant Non-Cancelable, Non-Returnable Bulk	STMMicroelectronics
<b>9202-046-02</b> STMMicroelectronics HCC40 Rad-Hard Hex Non-Inverting Buffer/Converter CMOS 3V1... More Add to BOM Datasheet Lifecycle Compare Avnet Manufacturer Part #: HCC4050BKT	Min: 10 Max: 1 10 CLICK TO QUOTE	7 - In Stock Steps in 1 bus day Additional Inventory Factory lead time - Constrained part. Lead time unavailable	RoHS Non-Compliant Non-Cancelable, Non-Returnable Bulk	STMMicroelectronics

Hello! Let's Chat

1  
2

**AVNET** Enter keyword, item, model or part number Q Hello, Robert Account & Tools 0 ITEM(S)

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Good Afternoon, Robert Ayers

**Quote# 704011046-0** KeyLegend Information Open Quote

**Customer Information** Date requested: May 11, 2023 | Expiration: —

Buyer: Robert Ayers Phone: 18052024465 Email: rayers@norris-associates.com

**Quote Information** Export/Download Quote

Ships to: Robert Ayers, 2534 Murrell Rd, Santa Barbara, CA 93109, US  
Project Name: —  
Originated: Online  
Customer Quote Number: —  
CSV XLS

**Quote Breakdown**

Search By: Search by keyword Q Advanced Filters

APPROVED (0) **PENDING (1)** NO INFO (0) ORDERED (0) Please note that purchasing quoted parts will be a separate transaction from your normal cart. BUY NOW

PART INFORMATION	QUANTITY 1	QUANTITY 2	QUANTITY 3	STOCK/LEAD TIME	COMMENTS	DESCRIPTION	STATUS
Manufacturer: STMMicroelectronics Mfg Part #: 9202-046-02 Add'l Charges: NO	Requested Qty: 10 Target Price: \$ 0.00000 Quoted Price: — Select qty 1	Requested Qty: — Target Price: — Quoted Price: — Select qty 2	Requested Qty: — Target Price: — Quoted Price: — Select qty 3	Factory Lead Time: Min/Muc: 10/1	—	HCC40 Rad-Hard Hex Non-Inverting Buffer/Converter CMOS 3V to 20V Solder Dip 16-Pin Flat SMD Strip Pack	Pending

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Quotes are valid for 30 days unless otherwise noted. Unless there is an applicable written agreement between Avnet and Buyer, any quote issued by Avnet and Avnet's acceptance of any order are subject to Avnet's Terms and Conditions of Sale found [here](#) or any different or additional terms.

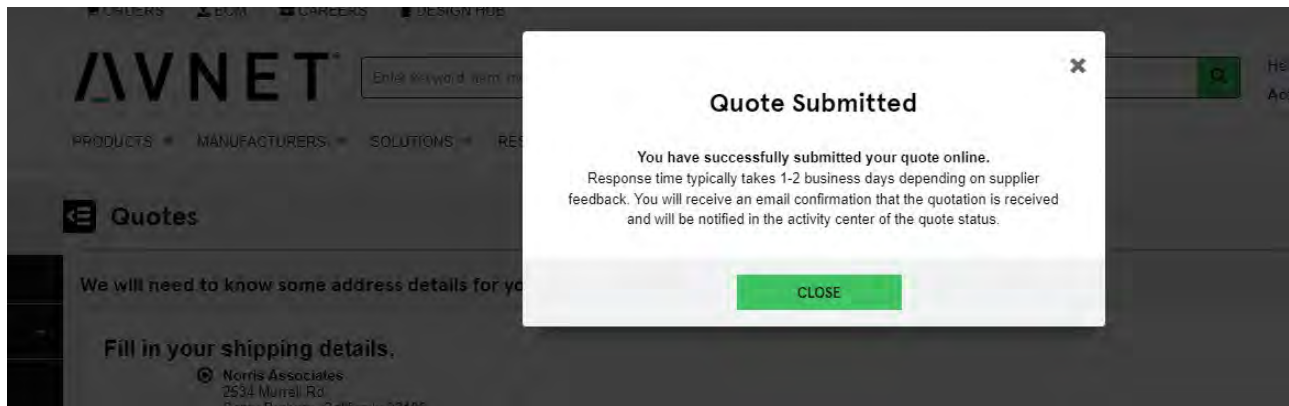
Chinese tariff data is provided solely for informational purposes to assist in estimating Chinese tariff impact. Avnet cannot validate its accuracy or completeness and it relies upon historical sales data that excludes future sales.

Hello! Let's Chat

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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HCC40xxx, HCC45xxx Ordering information								
Product name	Description	Commercial Product <sup>(1)</sup>	ESCC specification	Quality level	Package <sup>(2)</sup>	Lead finish	Marking <sup>(4)</sup>	Mass (g)
HCC4029B	Rad-hard presettable up / down counter	HCC4029BKT	920402502	ESCC Flight	FLAT16 ESA FP	Solder Dip	920402502	0.70
HCC4040B	Rad-hard 12-stage binary/Ripple counter	HCC4040BDG	920402608	ESCC Flight	DIL16 FP	Gold	920402608	2.20
		HCC4040BDT	920402609	ESCC Flight	DIL16 FP	Solder Dip	920402609	2.20
		HCC4040BK1	-	Engineering Model	FLAT16 ESA EM	Gold	HCC4040BK1	0.70
		HCC4040BKG	920402601	ESCC Flight	FLAT16 ESA FP	Gold	920402601	0.70
		HCC4040BKT	920402602	ESCC Flight	FLAT16 ESA FP	Solder Dip	920402602	0.70
HCC4046B	Rad-hard micropower Phase locker Loop	HCC4046BDG	920204408	ESCC Flight	DIL16 FP	Gold	920204408	2.20
		HCC4046BDT	920204409	ESCC Flight	DIL16 FP	Solder Dip	920204409	2.20
		HCC4046BK1	-	Engineering Model	FLAT16 ESA EM	Gold	HCC4046BK1	0.70
		HCC4046BKG	920204401	ESCC Flight	FLAT16 ESA FP	Gold	920204401	0.70
		HCC4046BKT	920204402	ESCC Flight	FLAT16 ESA FP	Solder Dip	920204402	0.70
HCC4047B	Rad-hard monostable/Astable multivibrator	HCC4047BDG	920700303	ESCC Flight	DIL14 FP	Gold	920700303	2.20
		HCC4047BDT	920700304	ESCC Flight	DIL14 FP	Solder Dip	920700304	2.20
		HCC4047BK1	-	Engineering Model	FLAT14 ESA EM	Gold	HCC4047BK1	0.70
		HCC4047BKG	920700301	ESCC Flight	FLAT14 ESA FP	Gold	920700301	0.70
		HCC4047BKT	920700302	ESCC Flight	FLAT14 ESA FP	Solder Dip	920700302	0.70
HCC4050B	Rad-hard hex non-inverting buffer / converter	HCC4050BDG	920204608	ESCC Flight	DIL16 FP	Gold	920204608	2.20
		HCC4050BDT	920204609	ESCC Flight	DIL16 FP	Solder Dip	920204609	2.20
		HCC4050BK1	-	Engineering Model	FLAT16 ESA EM	Gold	HCC4050BK1	0.70
		HCC4050BKG	920204601	ESCC Flight	FLAT16 ESA FP	Gold	920204601	0.70
		HCC4050BKT	920204602	ESCC Flight	FLAT16 ESA FP	Solder Dip	920204602	0.70
HCC4051B	Rad-hard single 8-channel analog mux / demux	HCC4051BDG	920204708	ESCC Flight	DIL16 FP	Gold	920204708	2.20
		HCC4051BDT	920204709	ESCC Flight	DIL16 FP	Solder Dip	920204709	2.20
		HCC4051BK1	-	Engineering Model	FLAT16 ESA EM	Gold	HCC4051BK1	0.70
		HCC4051BKG	920204701	ESCC Flight	FLAT16 ESA FP	Gold	920204701	0.70
		HCC4051BKT	920204702	ESCC Flight	FLAT16 ESA FP	Solder Dip	920204702	0.70

D06708 - Rev 8

page 2/18

1

2 For these reasons we rated the 19<sup>th</sup> item on the sample list as **MEDIUM**.

**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



**Because Accuracy Matters™**

1 **T. AIR ROVER 04-1077 POWER CORD, Master List Item 830**

- 2 Mr. Ayers conducted a reasonable search for this item and was not able to locate a listing.  
3 This item appears to be a spare part item for the Air Rover Flight Line Cooling System  
4 units listed in the master list as Item numbers 841 and 842.  
5 For these reasons we rated the 20<sup>th</sup> item on the sample list as **HARD**.



Robert Ayers, Project Manager, Norris Associates Technologies, LLC



***Because Accuracy Matters™***

1 **U. DATA DEVICE CORPORATION BU-61860B3-202 ENHANCED MINIATURE AD-**  
2 **VANCED COMMUNICATIONS ENGINE, Master List Item 189**

3 Mr. Ayers was able to locate Data Specification Sheet, a Schematic Diagram, and a Parts  
4 Details listing for this part.

BU-6174X/6184X/6186X  
ENHANCED MINIATURE ADVANCED  
COMMUNICATIONS ENGINE  
(ENHANCED MINI-ACE®/μ-ACE (MICRO-ACE®))



DESCRIPTION

The Enhanced Miniature Advanced Communications Engine (Enhanced Mini-ACE) and μ-ACE (Micro-ACE) family of MIL-STD-1553 terminals provide complete interfaces between a host processor and a 1553 bus, and integrate dual transceiver, protocol logic, and 4K or 64K words of RAM.

At 0.815" square, the μ-ACE (BGA package) option provides the smallest footprint in the industry.

The terminals are powered by a choice of 5V or 3.3V logic. Multiprotocol support of MIL-STD-1553A/B and STANAG 3838, including versions incorporating McAir compatible transmitters, is provided. There is a choice of 10, 12, 16, or 20 MHz clocks. The BC/RT/MT versions with 64K words of RAM include built-in RAM parity checking.

BC features include a built-in message sequence control engine, with a set of 20 instructions. This feature provides an autonomous means of implementing multi-frame message scheduling, message retry schemes, data double buffering, asynchronous message insertion, and reporting to the host CPU. The Enhanced Mini-ACE/μ-ACE incorporates a fully autonomous built-in self-test, providing comprehensive testing of the internal protocol logic and/or RAM.

The RT offers the same choices of subaddress buffering as the ACE and Mini-ACE (Plus), along with a global circular buffering option, 50% rollover interrupt for circular buffers, an interrupt status queue, and an "Auto-boot" option to support MIL-STD-1760.

The terminals provide the same flexibility in host interface configurations as the ACE/Mini-ACE, along with a reduction in the host processor's worst case holdoff time. Most software features are compatible with the previous generations of the Mini-ACE (Plus) and ACE series.



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- Fully Integrated 1553A/B Notice 2, McAir, STANAG 3838 Interface Terminal
- Compatible with Mini-ACE (Plus) and ACE Generations
- Choice of :
  - RT or BC/RT/MT in Same Footprint
  - RT or BC/RT/MT with 4K RAM
  - BC/RT/MT with 64K RAM, and RAM parity
- Choice of 5V or 3.3V Logic
- Package Options:
  - 1" Square Ceramic Flat Pack or Gull Wing
  - 0.815" Square BGA (μ-ACE)
- 5V Transceiver with 1760 and McAir Compatible Options
- Comprehensive Built-In Self-Test
- Flexible Processor/Memory Interface, with Reduced Host Wait Time
- Choice of 10, 12, 16, or 20 MHz Clock
- Highly Autonomous BC with Built-In Message Sequence Control:
  - Frame Scheduling
  - Branching
  - Asynchronous Message Insertion
  - General Purpose Queue
  - User-defined Interrupts
- Advanced RT Functions
  - Global Circular Buffering
  - Interrupt Status Queue
  - 50% Circular Buffer Rollover Interrupts
- Selective Message Monitor
  - Selection by Address, T/R Bit, Subaddress
  - Command and Data Stacks
  - 50% and 100% Stack Rollover Interrupts

FOR MORE INFORMATION CONTACT:

Technical Support:  
1-800-DDC-5757 ext. 7771

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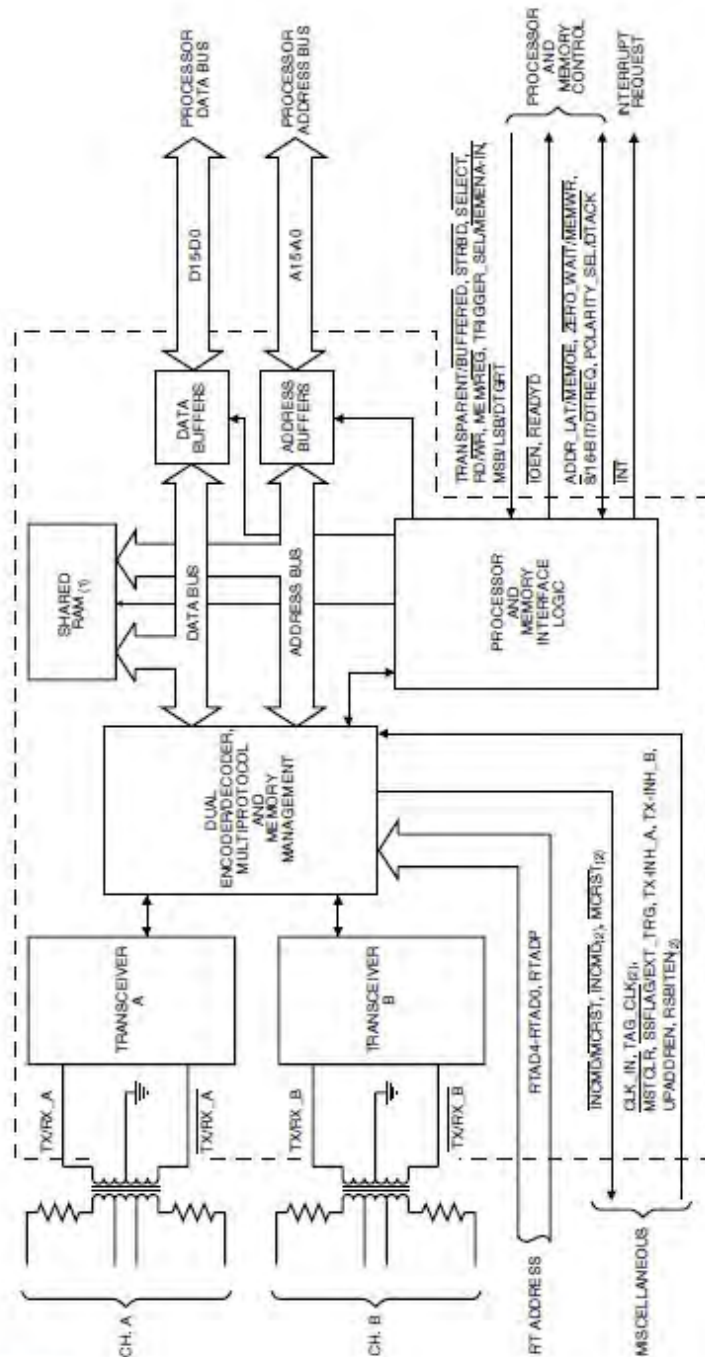


FIGURE 1. ENHANCED MINIATURE ADVANCED COMMUNICATIONS ENGINE BLOCK DIAGRAM

Data Device Corporation  
 www.ddc-web.com

2

BU-6174X/6184X/6186X  
 AD-10/10-0

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Part Search Parametric Search Part Details

Microcontrollers and Proc. / Serial IO/Communication / BU-61860B3-202

**BU-61860B3-202** by Data Device Corporation [Set Alert](#) [Datasheets](#) [Share](#)

Mil-Std-1553 Controller, 2 Channel(s), 0.125MBps, CMOS, PBGA128, 20.70 X 20.70 MM, 3.05 MM HEIGHT, PLASTIC, BGA-128

Quick Jump: [CAD Models](#) [Part Data Attributes](#) [Alternate Parts](#) [Related Parts](#)

**Part Details for BU-61860B3-202 by Data Device Corporation**

**Overview of BU-61860B3-202 by Data Device Corporation**

- ✕ Distributor Offerings: (0 listings)
- ✓ CAD Models: (Request Part)
- ✓ Part Data Attributes: (Available)
- ✕ Number of FFF Equivalents: (0 crosses)
- ✓ Number of Functional Equivalents: (3 options)
- ✕ Reference Designs: (Not Available)

Tip: Data for a part may vary between manufacturers. You can filter for manufacturers on the top of the page next to the part image and part number.

**Part Details for BU-61860B3-202**

BU-61860B3-202 CAD Models

There are no models available for this part yet.

Sign in to request this CAD model.

[Register](#) or [Sign In](#)


1

**BU-61860B3-202** by Data Device Corporation [Set Alert](#) [Datasheets](#) [Share](#)

Mil-Std-1553 Controller, 2 Channel(s), 0.125MBps, CMOS, PBGA128, 20.70 X 20.70 MM, 3.05 MM HEIGHT, PLASTIC, BGA-128

Quick Jump: [CAD Models](#) [Part Data Attributes](#) [Alternate Parts](#) [Related Parts](#)

**BU-61860B3-202 Part Data Attributes** [Parametric Data](#)


	<b>BU-61860B3-202</b> Data Device Corporation <a href="#">Buy Now</a> <a href="#">Datasheet</a>	<b>Compare Parts:</b> <b>BU-61860B3-202</b> Data Device Corporation Mil-Std-1553 Controller, 2 Channel(s), 0.125MBps, CMOS, PBGA128, 20.70 X 20.70 MM, 3.05 MM HEIGHT, PLASTIC, BGA-128  +  Select a part to compare: <a href="#">▼</a>  <a href="#">Compare Parts</a>
Pbfree Code	No	
Rohs Code	No	
Part Life Cycle Code	Active	
Ihs Manufacturer	DATA DEVICE CORP	
Part Package Code	BGA	
Package Description	BGA, BGA128,18X18,40	
Pin Count	128	
Reach Compliance Code	compliant	
HTS Code	8542.31.00.01	
Additional Feature	ALSO OPERATES AT 5V SUPPLY	
Address Bus Width	16	
Boundary Scan	NO	
Clock Frequency-Max	20 MHz	
Communication Protocol	MIL STD 1553A; MIL STD 1553B; MCAIR; STANAG-3838	
Data Encoding/Decoding Method	BIPH-LEVEL(MANCHESTER)	
Data Transfer Rate-Max	0.125 MBps	
External Data Bus Width	16	
JESD-30 Code	S-PBGA-B128	
JESD-609 Code	e0	
Length	20.7 mm	
Low Power Mode	NO	
Moisture Sensitivity Level	3	

2

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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		<b>BU-61860B3-202</b> by: Data Device Corporation	<a href="#">Set Alert</a>	<a href="#">Datasheets</a>	<a href="#">Share</a>
Mil-Std-1553 Controller, 2 Channel(s), 0.125Mbps, CMOS, PBGA128, 20.70 X 20.70 MM, 3.05 MM HEIGHT, PLASTIC, BGA-128					
Quick Jump: <a href="#">CAD Models</a> <a href="#">Part Data Attributes</a> <a href="#">Alternate Parts</a> <a href="#">Related Parts</a>					
Length	20.7 mm				
Low Power Mode	NO				
Moisture Sensitivity Level	3				
Number of Serial I/Os	2				
Number of Terminals	128				
Operating Temperature-Max	85 °C				
Operating Temperature-Min	-40 °C				
Package Body Material	PLASTIC/EPOXY				
Package Code	BGA				
Package Equivalence Code	BGA128,18X18,40				
Package Shape	SQUARE				
Package Style	GRID ARRAY				
Peak Reflow Temperature (Cel)	245				
Power Supplies	3.3, 5 V				
Qualification Status	Not Qualified				
Seated Height-Max	3.05 mm				
Supply Voltage-Max	3.6 V				
Supply Voltage-Min	3 V				
Supply Voltage-Nom	3.3 V				
Surface Mount	YES				
Technology	CMOS				
Temperature Grade	INDUSTRIAL				
Terminal Finish	TIN LEAD				
Terminal Form	BALL				
Terminal Pitch	1 mm				
Terminal Position	BOTTOM				
Width	20.7 mm				
uPs/uCs/Peripheral ICs Type	SERIAL IO/COMMUNICATION CONTROLLER, MIL-STD-1553				

- 1
- 2 While a Request For Quote from one supplier came back as not in stock, Mr. Ayers was
- 3 able to locate several other suppliers who showed the part was available in stock.

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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FW: Quote BU-61860B3-202 to Norris Associates Technologies from Ovaga Technologies Limited.



Nikki Ayers <nayers@norris-associates.com>  
To: robertayers950@gmail.com

From: Pearl <sales09@ovaga.com>

Sent: Wednesday, May 10, 2023 8:17 PM

To: Nikki Ayers <nayers@norris-associates.com>

Subject: Quote BU-61860B3-202 to Norris Associates Technologies from Ovaga Technologies Limited.

Hi, Nikki Ayers,

High appreciate your inquiry  
we are sincerely sorry that the part no. BU-61860B3-202 is out of stock from us now,

Do you have target price, DC and lead time requirement for this part? Will forward it to our global sourcing team for second checking.

Thank you

Your Sincerely.

Pearl



Ovaga Technologies Limited.

奥华加科技有限公司

1

2 Mr. Ayers was assisted by another of our research staff, Nikki Ayers



Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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1

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**BU-61860B3-202** Price & Stock

Distributors ▾

☒ All Sellers 8 ☐ DigiPart Trusted 2 ☐ Authorized Only 0

☐ Exact Matches

Vyrian Certificates

Part #	Manufacturer	Description	Stock	Price	Buy
BU-61860B3-202	DATA DEVICE CORP	Mil-Std-1553 Controller, 2 Channel(s), 0.125Mbps, CMOS, PBGA128 ; DC:2019	1559		<a href="#">Inquiry</a>

Resion LLC Certificates

Part #	Manufacturer	Description	Stock	Price	Buy
BU-61860B3-202	Data	In-Stock ; DC:1251	1		<a href="#">Inquiry</a>

Viassion Technology Co., Ltd

Part #	Manufacturer	Description	Stock	Price	Buy
BU-61860B3-202	DDC	Call New and original,In Stock	15427		<a href="#">Inquiry</a>

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Q

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Part #	Manufacturer	Description	Stock	Price	Buy
BU61860B3202	DDC	OEM/CM QUOTES ONLY   NO BROKERS	5		<a href="#">Inquiry</a>

[Sierra IC Inc.](#)

Part #	Manufacturer	Description	Stock	Price	Buy
BU61860B3202 sku #: BU61860B3202			35		<a href="#">Inquiry</a>

[Green Light Electronics](#)

Part #	Manufacturer	Description	Stock	Price	Buy
BU61860B3202	Request The Manufacturer	OEM/CM ONLY	341		<a href="#">Inquiry</a>

[Easev semiconductor Limited](#)
[Certificates](#)

Part #	Manufacturer	Description	Stock	Price	Buy
BU-61860B3-202	DDC	BGA : DC:13+	2		<a href="#">Inquiry</a>

See Also:  
[BU-61864G3-140](#)

- 1
- 2 While we have not received any other Request For Quote responses back as of this writ-
- 3 ing, due to the large availability of this part on the open market, we rate the purchasing
- 4 effort for the 21<sup>st</sup> item on the sample list as **EASY**.

**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



**Because Accuracy Matters™**

1 **V. BETA TRANSFORMER NH17147-4-090 COUPLER ASSEMBLY, Master List Item**  
2 **189**

3 Mr. Ayers performed several reasonable searches for this part as well as searching for  
4 several other BETA TRANSFORMER COUPLER ASSEMBLY Parts as listed in the Master  
5 List, using several different major search engines, and was not able to determine the avail-  
6 ability of any of the coupler items searched for.  
7 For these reasons we rated the 22<sup>nd</sup> item on the sample list as **UNDETERMINED**.

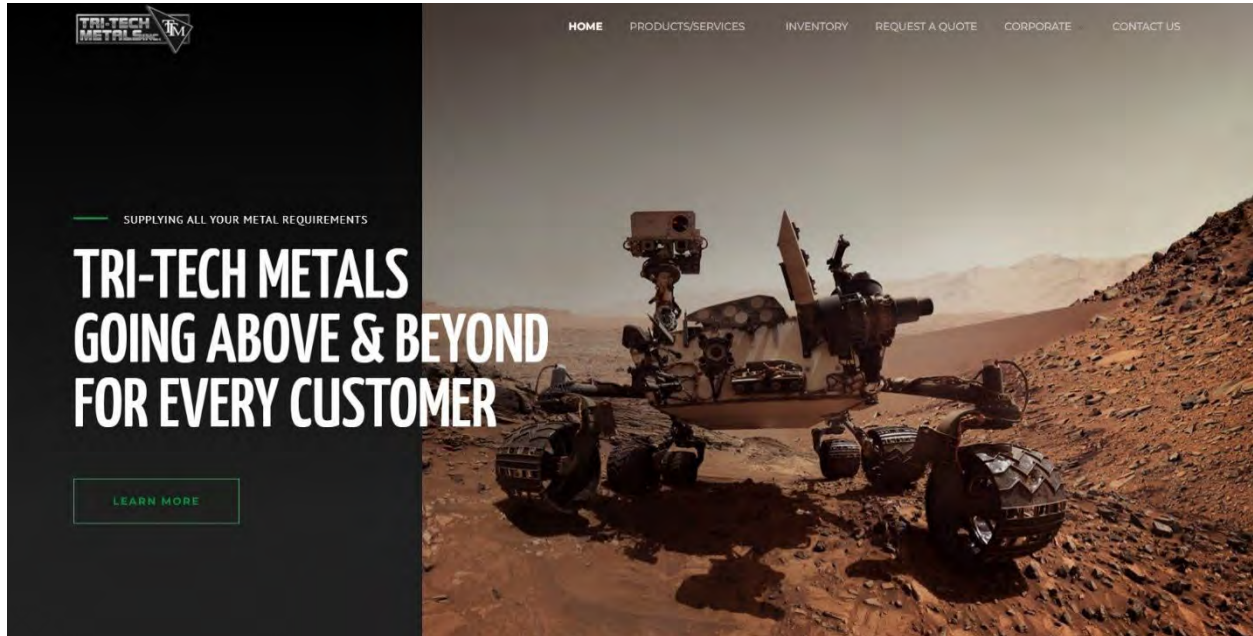
Robert Ayers, Project Manager, Norris Associates Technologies, LLC



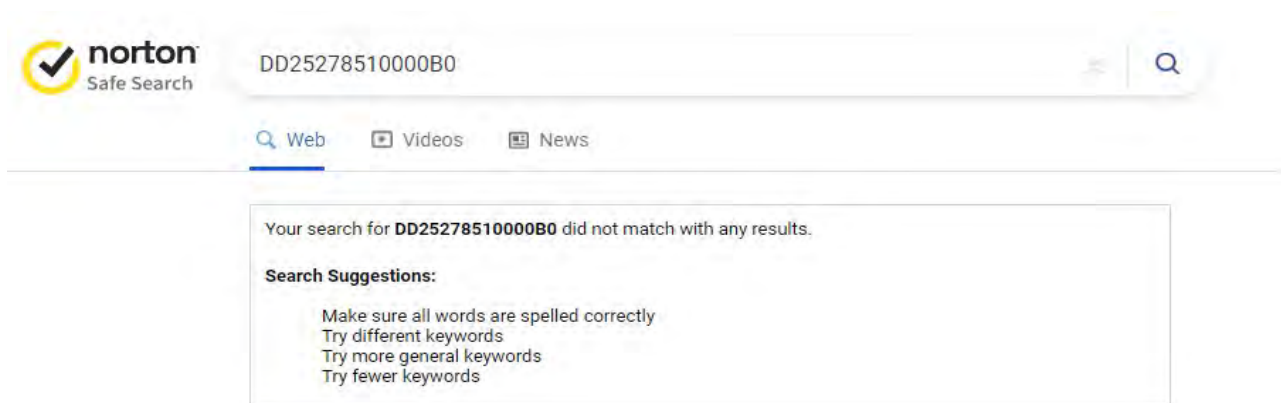
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**W. TRI-TECH METALS, INC. – MULTIPLE, VARIOUS TYPES OF ALLOYS, 327 individual Master List Item numbers.**

Mr. Ayers researched Tri-Tech Metals, Inc. as a group resource, since there were 327 listed items sourced through this supplier.



We discovered that the Item or Part numbers listed with this supplier in the Master List did not result in any “hits” or listings. The Item numbers appear to be some type of Airtech internal numbering system which is not translatable to its equivalent with Tri-Tech Metals, Inc. An example of this is shown below.



Because of the apparently proprietary Airtech numbering system, we researched the types of metals described in the listings.

We found that the metals descriptions generally either referred to Alloys or to Military specifications for hardness, formulation, or other specifications. While there are some dimensions listed, there is no clear indication if this refers to specific metal shapes or to bulk metals for machining by the ultimate consumer.



# Robert Ayers, Project Manager, Norris Associates Technologies, LLC



## Because Accuracy Matters™

- 1 As an illustrative example, one type of Alloy is referred to as Ti-6Al-4V. This is a type of
- 2 Titanium Alloy commonly used in military and aerospace applications.

tion

- 3
- 4 We identified several suppliers who stated they can supply this material in sheet, plate,
- 5 and bar stock.

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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## 6AL-4V Titanium

**Alternate Names:** Grade 5 Titanium, 6-4 Titanium

**Description:** 6AL-4V is the most common alloy of Titanium. As an alloyed Grade of Titanium, it is strengthened by the inclusion of roughly 6% Aluminum and 4% Vanadium. It is known as an alpha-beta Titanium alloy, containing both alpha and beta phases at room temperature. 6AL-4V typically comes in the Annealed condition, but it can be strengthened by heat treatment, such as Solution Treating and Aging. 6AL-4V offers good weldability. Overall, 6AL-4V exhibits high strength, light weight, and corrosion resistance, which make it an excellent choice for applications in aerospace, medical, oil and gas, marine, and recreational industries.

**Machinability:** The American Iron and Steel Institute (AISI) determined a rating system of machinability of different materials. 160 Brinell B1112 steel was arbitrarily assigned a machinability rating of 100%. Using this as a comparable standard, ratings less than 100% are more challenging to machine, and ratings more than 100% are easier to machine. Titanium 6AL-4V is rated at 22% of B1112. Low cutting speeds, heavy feed rates, sharp tools, and ample cutting fluid are prescribed.

**6AL-4V Titanium is available in the following Product Forms:**

[Round Bar \(Rod\)](#), [Rectangular Flat Bar \(Block\)](#), [Plate](#), and [Sheet](#)

**6AL-4V Titanium is available in the following Specifications:**

[AMS 4911](#)

[AMS 4967](#)

[AMS-T-9046 \(AB-1.6AL4V\)](#)

[MIL-T-9047 \(6AL-4V\)](#)

[AMS 4928](#)

[AMS 6930](#)

[AMS-T-9047 \(6AL-4V\)](#)

[ASTM B348 \(Grade 5\)](#)

[AMS 4965](#)

[AMS 6931](#)

[MIL-T-9046 \(AB-1.6AL-4V\)](#)

[ASTM B265 \(Grade 5\)](#)

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OR CONVERT YOUR TITANIUM MEASUREMENTS.**

Mr. Ayers put in a Request For Quote [RFQ] with Performance Titanium Group which was still pending as of the date of this report.



Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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## PTG welcomes the opportunity to quote you!

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Robert Ayers

18052024465

rayers@norris-associates.com

Norris Associates

Urgency

Looking for a budgetary quote or information.

What titanium products are you looking for?

I would like a quote or at least a price guideline on several items, Ti-6Al-4V GR5 stock .875" thick x approx 19.7" x 19.7" and Ti-6Al-4V 1.25" thickness x 2.25" x 2.50". Please quote an individual price and any quantity discounts that may apply. Thank You

Submit

- 1
- 2 While we were not able to research and source the exact item number due to the proprietary naming system previously described, we believe that this type of titanium alloy is
- 3 readily available and can be supplied in any size and specification.
- 4
- 5 We also found this grade of Titanium Alloy is available on Amazon in a variety of sizes.

amazon prime Deliver to Robert Mesa 85207 All titanium grade 5

4mm Thick Titanium 6Al-4v Sheet (0.16" x 6" x 14") Grade 5 Plate Metal

Brand: Generic

\$70.00

Best price

Purchase options and add-ons

Payment plans

\$12.71/mo (\$6 mo) at example APR of 30% (rates from 10-30% APR)

Material: titanium\_grade\_5

Brand: Generic

Shape: Rectangular

Finish Type: Metal

Item Form: Sheet

Report incorrect product information

\$70.00

FREE delivery May 22 - June 1. Details

Or fastest delivery May 15 - 17. Details

Deliver to Robert - Mesa 85207

In Stock

Qty: 1

Add to Cart

Buy Now

Payment: Secure transaction

Ships from: WEN-Titanium

Sold by: WEN-Titanium

Returns: Eligible for Return, Refund or Replacement within 30 days of receipt

- 6
- 7 For these reasons, we feel that this type of Titanium Alloy would be easy to procure. We
- 8 have reason to believe that this situation of broad availability applies to most or all the
- 9 other 326 alloys listed with this same supplier. Since this single supplier would have com-
- 10 mon practices, we assigned all 327 of its alloys, starting with the 23<sup>rd</sup> item, a unique cate-
- 11 gory **LIKELY**.

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



**Because Accuracy Matters™**

- 1 **X. STEADFAST 920112002F MICROCIRCUIT QUAD 2, Master List Item 387**
- 2 Mr. Ayers located a cross reference for the listed part.

Product name	Description	Other features	Commercial product <sup>(1)</sup>	ESCC specification	Quality level	Package <sup>(2)</sup>	Lead finish	Marking <sup>(3)</sup>	Mass (g)
M54HC123	Rad-hard dual retriggerable monostable multivibrator with clear		M54HC123DG	920700610F	ESCC Flight	DIL16 FP	Gold	920700610F	2.20
			M54HC123DT	920700611F	ESCC Flight	DIL16 FP	Solder Dip	920700611F	2.20
			M54HC123K1	-	Engineering Model	FLAT16 ESA EM	Gold	M54HC123K1	0.70
			M54HC123KG	920700601F	ESCC Flight	FLAT16 ESA FP	Gold	920700601F	0.70
			M54HC123KT	920700602F	ESCC Flight	FLAT16 ESA FP	Solder Dip	920700602F	0.70
M54HC125	Rad-hard quad bus buffer 3-state	Inverted enables	M54HC125K1	-	Engineering Model	FLAT14 ESA EM	Gold	M54HC125K1	0.70
			M54HC125KG	940103901F	ESCC Flight	FLAT14 ESA FP	Gold	940103901F	0.70
			M54HC125KT	940103902F	ESCC Flight	FLAT14 ESA FP	Solder Dip	940103902F	0.70
M54HC132	Rad-hard quad 2-input Schmitt NAND gate		M54HC132DG	920112003F	ESCC Flight	DIL14 FP	Gold	920112003F	2.20
			M54HC132DT	920112004F	ESCC Flight	DIL14 FP	Solder Dip	920112004F	2.20
			M54HC132K1	-	Engineering Model	FLAT14 ESA EM	Gold	M54HC132K1	0.70
			M54HC132KG	920112001F	ESCC Flight	FLAT14 ESA FP	Gold	920112001F	0.70
			M54HC132KT	920112002F	ESCC Flight	FLAT14 ESA FP	Solder Dip	920112002F	0.70
M54HC138	Rad-hard 3-to-8 line decoder inverter		M54HC138DG	940804610F	ESCC Flight	DIL16 FP	Gold	940804610F	2.20
			M54HC138DT	940804611F	ESCC Flight	DIL16 FP	Solder Dip	940804611F	2.20
			M54HC138K1	-	Engineering Model	FLAT16 ESA EM	Gold	M54HC138K1	0.70
			M54HC138KG	940804601F	ESCC Flight	FLAT16 ESA FP	Gold	940804601F	0.70
			M54HC138KT	940804602F	ESCC Flight	FLAT16 ESA FP	Solder Dip	940804602F	0.70
M54HC139	Rad-hard dual 2-to-4 line decoder / demultiplexer		M54HC139DG	920501710F	ESCC Flight	DIL16 FP	Gold	920501710F	2.20
			M54HC139DT	920501711F	ESCC Flight	DIL16 FP	Solder Dip	920501711F	2.20
			M54HC139K1	-	Engineering Model	FLAT16 ESA EM	Gold	M54HC139K1	0.70
			M54HC139KG	920501701F	ESCC Flight	FLAT16 ESA FP	Gold	920501701F	0.70

- 3 After cross-referencing the listed item, Mr. Ayers was able to locate a Datasheet for the
- 4 item.



Robert Ayers, Project Manager, Norris Associates Technologies, LLC

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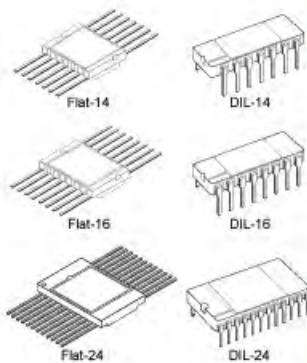
1



M54HCxxx, M54HCTxxx

Datasheet

## Rad-hard high speed 2 to 6 V CMOS logic series



The upper metallic lid is not electrically connected to any pins, nor to the IC die inside the package

### Features

- ESCC qualified
- 7 V Absolute maximum ratings
- 2 V to 6 V operating voltage for CMOS M54HCxxx series
- 4.5 V to 5.5 V operating voltage for TTL M54HCTxxx series
- Hermetic packages
- Rad-hard 50 krad (Si) TID
- SEL immune up to 110 MeV.cm<sup>2</sup>/mg
- -55 °C to +125 °C temperature range
- ESCC specification available on ESCC website for each part

### Description

The M54HCxxx and M54HCTxxx series is composed of CMOS functions, specifically designed to meet the radiation requirements of the aerospace industry. They include a large set of gates, flip-flops, multiplexers, counters, bus interface and several other functions. The radiation hardness, the single event latch-up (SEL) immunity and the housing in hermetic packages of all types of both series make them ideally suited for use in the most difficult environmental conditions.

They are all qualified and tested over -55°C to +125°C ambient temperature range. The complete specification of each type is available from the ESCC web site: <https://escies.org> using its ESCC part number. STMicroelectronics® and guarantees full compliance of qualified parts with these ESCC specifications.

Product status link

M54HCxxx, M54HCTxxx

2

Robert Ayers, Project Manager, Norris Associates Technologies, LLC

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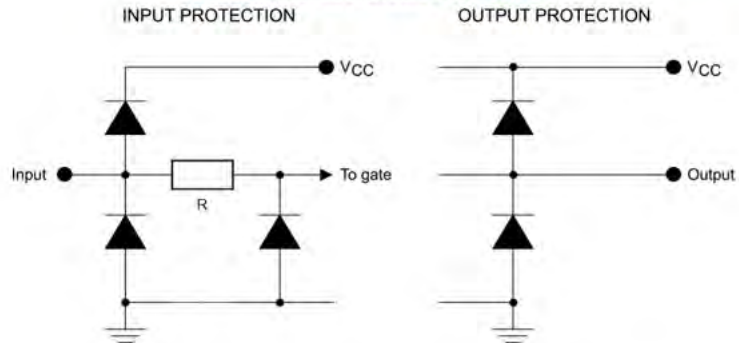
1



M54HCxxx, M54HCTxxx  
Input equivalent circuit diagram

## 1 Input equivalent circuit diagram

Figure 1. Input and equivalent circuit diagram



Note: For the 54HC4049 and the 54HC4050 input equivalent circuit, there is no diode connected to VCC.

- 2 Mr. Ayers attempted to Request A Quote and found the feature was inoperative at this
- 3 time. Further research has shown there appears to be no availability of this part currently.
- 4 For these reasons we rated the 24<sup>th</sup> item on the sample list as **HARD**.

**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



**Because Accuracy Matters™**

- 1 Y. **Dimensioned Alloy ASTM D5989 0.250X4X0, Master List Item 443**
- 2 The 25<sup>th</sup> item is from TRI-TECH METALS INC and is thus rated as **LIKELY**.

**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



**Because Accuracy Matters™**

1 **Z. BETA TRANSFORMER BXK-2 SERIAL INTERFACE BOARD, Master List Item 234**

2 Mr. Ayers researched this item and found there was no listing in any search engine for the  
3 item. This item is listed in the Master List as being supplied by Beta Transformer. Mr.  
4 Ayers found Beta Transformer resolves back to Data Device Corporation. When perform-  
5 ing a search directly on the Data Device Corporation website, the item BXK-2 shows NO  
6 DATA FOUND.



7 We were not able to determine if this means the part is discontinued and no longer availa-  
8 ble or is a hidden and inaccessible item.  
9 For these reasons we rated the 26<sup>th</sup> item on the sample list as **UNDETERMINED.**



**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



**Because Accuracy Matters™**

- 1 **AA. DD25278520000B0, BAR, AISI 1144,U D30, Master List Item 547**
- 2 **BB. AMS-QQ-S-763, STS304-B/Ø0.39 X 78.74I, Master List Item 499**
- 3 The 27<sup>th</sup> and 28<sup>th</sup> items are from TRI-TECH METALS INC and are thus rated as **LIKELY**.

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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1 **CC. STEADFAST JANSR2N2222AUB BIPOLAR TRANSISTOR NPN, Master List**  
2 **Item 406**

3 Mr. Ayers was able to locate the exact item ATTRIBUTES as well as TECH DATA SHEET.

**Digi-Key** ELECTRONICS

All Products Enter keyword or part #

Products Manufacturers Resources

Product Index > Discrete Semiconductor Products > Transistors > Bipolar (BJT) > Single Bipolar Transistors > Microchip Technology JANSR2N2222AUB

QPL or Military Specs are for reference only. Parts are not for military use. See Terms and Conditions.

**JANSR2N2222AUB**

Image shown is a representation only. Exact specifications should be obtained from the product data sheet.

Digi-Key Part Number	JANSR2N2222AUB-ND
Manufacturer	<a href="#">Microchip Technology</a>
Manufacturer Product Number	JANSR2N2222AUB
Description	TRANS NPN 50V 0.8A UB
Manufacturer Standard Lead Time	40 Weeks
Detailed Description	Bipolar (BJT) Transistor NPN 50 V 800 mA 500 mW Surface Mount UB
Customer Reference	<input type="text" value="Customer Reference"/>
Datasheet	<a href="#">Datasheet</a>

4

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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## Product Attributes

TYPE	DESCRIPTION	SELECT
Category	Discrete Semiconductor Products	<input type="radio"/>
	Transistors	<input type="radio"/>
	Bipolar (BJT)	<input type="radio"/>
	Single Bipolar Transistors	<input checked="" type="radio"/>
Mfr	Microchip Technology	<input type="checkbox"/>
Series	Military, MIL-PRF-19500/255	<input type="checkbox"/>
Package	Tray	<input type="checkbox"/>
Product Status	Active	<input type="checkbox"/>
Transistor Type	NPN	<input type="checkbox"/>
Current - Collector (Ic) (Max)	800 mA	<input type="checkbox"/>
Voltage - Collector Emitter Breakdown (Max)	50 V	<input type="checkbox"/>
Vce Saturation (Max) @ Ib, Ic	1V @ 50mA, 500mA	<input type="checkbox"/>
Current - Collector Cutoff (Max)	50nA	<input type="checkbox"/>
DC Current Gain (hFE) (Min) @ Ic, Vce	100 @ 150mA, 10V	<input type="checkbox"/>
Power - Max	500 mW	<input type="checkbox"/>
Frequency - Transition	-	<input type="checkbox"/>
Operating Temperature	-65°C ~ 200°C (TJ)	<input type="checkbox"/>
Mounting Type	Surface Mount	<input type="checkbox"/>
Package / Case	3-SMD, No Lead	<input type="checkbox"/>
Supplier Device Package	UB	<input type="checkbox"/>
Base Product Number	2N2222	<input type="checkbox"/>

Report Product Information Error

View Similar

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6 Lake Street, Lawrence, MA 01841  
1-800-446-1158 / (978) 620-2600 / Fax: (978) 689-0803  
Website: <http://www.microsemi.com>

## TECHNICAL DATA SHEET

### RADIATION HARDENED NPN SILICON SWITCHING TRANSISTOR Qualified per MIL-PRF-19500/255

#### DEVICES

2N2221A	2N2222A
2N2221AL	2N2222AL
2N2221AUA	2N2222AUA
2N2221AUB	2N2222AUB
2N2221AUBC	2N2222AUBC

#### LEVELS

JANSM – 3K Rads (Si)
JANSJ – 10K Rads (Si)
JANSP – 30K Rads (Si)
JANSL – 50K Rads (Si)
JANSR – 100K Rads (Si)
JANSF – 300K Rads (Si)
JANSG – 500K Rads (Si)
JANSH – 1MEG Rads (Si)

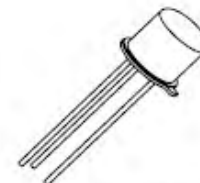
#### ABSOLUTE MAXIMUM RATINGS ( $T_C = +25^\circ\text{C}$ unless otherwise noted)

Parameters / Test Conditions	Symbol	Value	Unit
Collector-Emitter Voltage	$V_{CE0}$	50	Vdc
Collector-Base Voltage	$V_{CB0}$	75	Vdc
Emitter-Base Voltage	$V_{EB0}$	6.0	Vdc
Collector Current	$I_C$	800	mA dc
Total Power Dissipation @ $T_A = +25^\circ\text{C}$			
2N2221A, L	$P_T$	0.5	W
2N2221AUA		0.65	
2N2221AUB, UBC		0.50	
2N2222A, L		0.5	
2N2222AUA			
2N2222AUB, UBC			
Operating & Storage Junction Temperature Range	$T_{op}, T_{stg}$	-65 to +200	$^\circ\text{C}$

#### THERMAL CHARACTERISTICS

Parameters / Test Conditions	Symbol	Max.	Unit
Thermal Resistance, Junction-to-Ambient			
2N2221A, L	$R_{\theta JA}$	325	$^\circ\text{C/W}$
2N2221AUA		210	
2N2221AUB, UBC		325	
2N2222A, L		325	
2N2222AUA			
2N2222AUB, UBC			

- Derate linearly 3.08 mW/ $^\circ\text{C}$  above  $T_A > +37.5^\circ\text{C}$
- Derate linearly 4.76 mW/ $^\circ\text{C}$  above  $T_A > +63.5^\circ\text{C}$



TO-18 (TO-206AA)  
2N2221A, 2N2222A



4 PIN  
2N2221AUA, 2N2222AUA



3 PIN  
2N2221AUB, 2N2222AUB  
2N2221AUBC, 2N2222AUBC  
(UBC = Ceramic Lid Version)



Robert Ayers, Project Manager, Norris Associates Technologies, LLC

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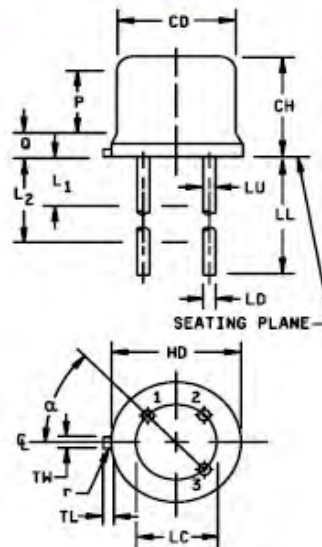


**Microsemi**

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 Website: <http://www.microsemi.com>

## TECHNICAL DATA SHEET

### PACKAGE DIMENSIONS



#### NOTES:

1. Dimensions are in inches.
2. Millimeters are given for general information only.
3. Beyond r (radius) maximum, TL shall be held for a minimum length of .011 inch (0.28 mm).
4. Dimension TL measured from maximum HD.
5. Body contour optional within zone defined by HD, CD, and Q.
6. Leads at gauge plane .054 +.001 -.000 inch (1.37 +0.03 -0.00 mm) below seating plane shall be within .007 inch (0.18 mm) radius of true position (TP) at maximum material condition (MMC) relative to tab at MMC.
7. Dimension LU applies between L<sub>1</sub> and L<sub>2</sub>. Dimension LD applies between L<sub>2</sub> and LL minimum. Diameter is uncontrolled in L<sub>1</sub> and beyond LL minimum.
8. All three leads.
9. The collector shall be internally connected to the case.
10. Dimension r (radius) applies to both inside corners of tab.
11. In accordance with ASME Y14.5M, diameters are equivalent to  $\phi$  symbol.
12. Lead 1 = emitter, lead 2 = base, lead 3 = collector.
13. For L suffix devices, dimension LL = 1.5 inches (38.10 mm) min. and 1.75 inches (44.45 mm) max.

Symbol	Dimensions				Note
	Inches		Millimeters		
	Min	Max	Min	Max	
CD	.178	.195	4.52	4.95	
CH	.170	.210	4.32	5.33	
HD	.209	.230	5.31	5.84	
LC	.100 TP		2.54 TP		6
LD	.016	.021	0.41	0.53	7,8
LL	.500	.750	12.70	19.05	7,8,13
LU	.016	.019	0.41	0.48	7,8
L <sub>1</sub>		.050		1.27	7,8
L <sub>2</sub>	.250		6.35		7,8
P	.100		2.54		
Q		.030		0.76	5
TL	.028	.048	0.71	1.22	3,4
TW	.036	.046	0.91	1.17	3
r		.010		0.25	10
α	45° TP		45° TP		6
1, 2, 9, 11, 12, 13					

FIGURE 1. Physical dimensions (similar to TO-18).

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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**JANSR2N2222AUB**  
VPT Components  
Bipolar Transistors - BJT MIL-PRF-19500/255

Availability: **Standard: 390 In Stock**

**Product Details**  
Manufacturer: VPT Components  
TTI Part Number: JANSR2N2222AUB  
Mfr Part Number: JANSR2N2222AUB  
Product Category: Bipolar Transistors - BJT

**Standard**  
**390 In Stock**  
Additional Stock Lead Time: 35 Wks  
Quantity:   
Min: 1 / Mult: 1  
**Add to Cart**  
Add to Quote

Description	Product Attribute	Search Similar
Manufacturer	VPT Components	<input type="checkbox"/>
Packaging	Bulk	<input type="checkbox"/>
Product Type	BJTs - Bipolar Transistors	<input type="checkbox"/>
Technology	Si	<input type="checkbox"/>

Export and Environmental Classification	
HTS	8541290095
RoHS Compliant	No
RoHS Exemption Number	N/A
Lead(PB) in Terminals	Yes
REACH SVHC	No
REACH Substance Name	N/A

**Documents**  
EDA / CAD Models [EDA / CAD Help](#)  
Request Free CAD Models

Mr. Ayers then searched for the item availability and found it was readily available in quantity.

**Added To Cart**

TTI: JANSR2N2222AUB  
Mfr: JANSR2N2222AUB  
VPT Components

Ext. Price:  
@

**Cart Total:**  
View Cart (Items)  
Continue Shopping

We were able to add this part to a cart and proceed to a checkout status.

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



**Because Accuracy Matters™**

1

2 For these reasons we rated the 29<sup>th</sup> item on the sample list as **EASY**

**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



**Because Accuracy Matters™**

- 1 **DD. AMS 4050,A7050-T7451,0.99X9.06X13.39, Master List Item 468**
- 2 **EE. QQ-A-250/4,2024-T3, SHEET,AL(.063" x 48", Master List Item 747**
- 3 The 30<sup>th</sup> and 31st items are from TRI-TECH METALS INC and are thus rated as **LIKELY**.



Robert Ayers, Project Manager, Norris Associates Technologies, LLC



**Because Accuracy Matters™**

- 1 **FF.BETA TRANSFORMER MLP-2216-HREL TRANSFORMER, Master List Item 241**
- 2 Mr. Ayers was able to locate a description of the listed item.

Powered by GlobalSpec  
**Datasheets360**

Enter Part #

Home > Discrete > Pulse/Datacom Transformers > Part #: MLP-2216

**Part #: MLP-2216**  
Part Category: Transformers  
Manufacturer: Beta Transformer Technology Corp.  
Description: Pulse Transformer, GENERAL PURPOSE Application(s), 1:2:15

SPECIFICATIONS	
REACH Compliant	Yes
Status	Transferred
Transformer Type	PULSE TRANSFORMER
Application	GENERAL PURPOSE
Isolation Voltage	100.0 V
JESD-609 Code	e0
Mounting Feature	SURFACE MOUNT
Number of Functions	1
Operating Temperature-Min	-55.0 Cel
Operating Temperature-Max	130.0 Cel
Physical Dimension	L10.16XB10.16XH4.699 (mm)
Pulse Rise Time-Max	250.0 ns
Terminal Finish	Tin/Lead (Sn/Pb) - with Nickel (Ni) barrier
Turns Ratio (Np:Ns)	1:2:15
Height	4.699 mm
Length	10.16 mm
Width	10.16 mm
Additional Feature	HEIGHT DIMENSION INCLUDES TERMINAL ALSO; MIL-PRF-21038

SHOW LESS

- 3
- 4 Mr. Ayers was also able to locate a Data Specification Sheet for the listed item.

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



**Because Accuracy Matters™**

**BETA TRANSFORMER  
 TECHNOLOGY CORPORATION**  
 A Subsidiary of Data Device Corporation  
 40 Orville Drive, Bohemia, NY 11716-2529  
 Phone: (631) 244-7393; Fax: (631) 244-8893  
 Web site: www.bttc-beta.com



## MLP-2000 SERIES

### MINIATURE LOW-PROFILE 0.185" MAXIMUM HEIGHT MIL-STD-1553 SMT TRANSFORMERS

#### FEATURES

- **New! 3.3V Ratios: 1.41:1, 1:2.07, 1:2.15, 1:2.65, 2.00:1 and 1:3.0**
- **Miniature package requires less board space**
- **Low Profile**
- **Surface Mount  
 - Tape and Reel Available**
- **For Use with MIL-STD-1553A and B, McAir, A-3818, A-5690, A-5232, and A-4905**
- **Withstands Conventional IR/Convection Reflow Process**
- **-55°C to +130°C Operating Temperature Range**
- **Built and Tested to MIL-PRF-21038 and MIL-STD-202**
- **Available RoHS Compliant**

#### DESCRIPTION AND APPLICATIONS

The military data bus specification, MIL-STD-1553, brought about the need for versatile pulse transformers that meet all the electrical requirements of Manchester II serial bi-phase data transmission. The MLP-2000 series of transformers provide the turns ratio configurations, component isolation, and common mode rejection ratio characteristics necessary for MIL-STD-1553A and B compliance.

The step-up and step-down ratios that are available with the MLP-2000 series complement DDC's entire MIL-STD-1553 product line. These transformers are low-profile and provide a 70% reduction in board space compared to surface mount QPL pulse transformers. They are encapsulated and meet the performance requirements of MIL-PRF-21038. Sinusoidal or trapezoidal waveforms are accurately processed, making the MLP-2000 series of transformers an excellent choice for any MIL-STD-1553A or B application.

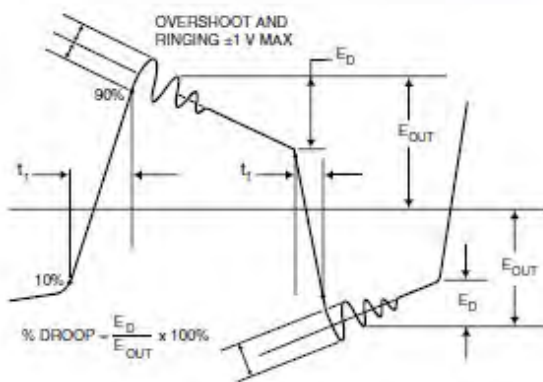


FIGURE 1. WAVEFORM INTEGRITY

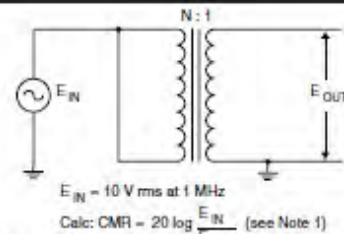
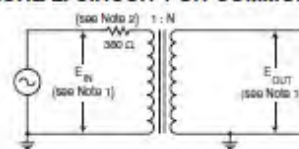


FIGURE 2. CIRCUIT FOR COMMON MODE REJECTION



$E_{IN}$  (5, 12, 15 volt) = 250 kHz square wave, 27.0 volts peak to peak with a rise and fall time of 90ns  $\pm 5$  ns.

$E_{IN}$  (3.3 volt) = 250 kHz square wave, 7.0 volts peak to peak with a rise and fall time of 90ns  $\pm 5$  ns.

Calc: Droop =  $\frac{E_D}{E_{OUT}} \times 100\%$  (see figure 1 for  $E_D$ ).

FIGURE 3. CIRCUIT FOR WAVEFORM INTEGRITY

Note: Input to be applied and output to be measured for all dash numbers are as shown. N represents highest turns winding in each test.

© 2000 Data Device Corporation

Robert Ayers, Project Manager, Norris Associates Technologies, LLC

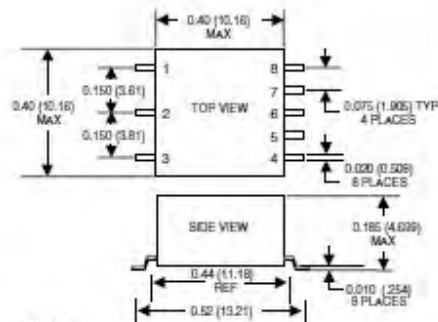


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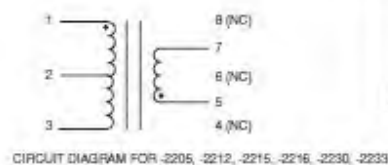
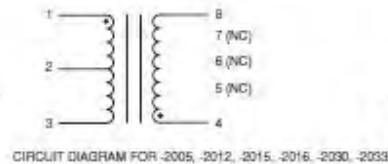
BETA TRANSFORMER TECHNOLOGY CORP • 40 ORVILLE DRIVE • BOHEMIA NY 11716-2529 • 631-244-7393 • FAX 631-244-8893

TABLE 1. GENERAL SPECIFICATIONS			
PARAMETER	UNIT	VALUE	REMARKS
Case	—	—	Flame Resistant, Dialyl Phthalate
Terminals	—	—	C11000 ETP Copper, Sn60Pb40 Plated over nickel underplating
Terminals (Alternate)	—	—	C11000 ETP Copper, Sn63Pb37 Dipped, over matte Sn100 plating, over nickel underplating
Weight	Oz (gm)	0.044 (1.25) max.	
Terminal Strength	lbs	2	2 pounds applied force, Method 211, MIL-STD-202, Test Condition A
Dielectric Withstanding Voltage	Vrms	100	Method 301, MIL-STD-202
Life (expectancy "X")	Hrs	10,000 min.	In accordance with MIL-PRF-21038
Insulation Resistance	MΩ	1,000 min.	At 250 Vdc using Method 302, Test Condition B, MIL-STD-202
Pulse Width (Output Pulse)	μs	2	Tested using FIGURE 3 with resulting FIGURE 1 waveform.
Overshoot	V	± 1 max.	Tested using FIGURE 3 with resulting FIGURE 1 waveform.
Rise Time (of Output Pulse)	ns	—	Tested using FIGURE 3 with resulting FIGURE 1 waveform. See ELECTRICAL CHARACTERISTICS TABLE.
Common Mode Rejection	dB	45	Tested using FIGURE 2.
Operating Temperature Range	°C	-55° to +130°	
Droop	%	≤ 20	Tested using FIGURE 3 with resulting FIGURE 1 waveform.
DC Resistance	Ω	—	See ELECTRICAL CHARACTERISTICS TABLE
Input Impedance	Ω	—	See ELECTRICAL CHARACTERISTICS TABLE.

## CONFIGURATION



NOTES:  
(1) Dimensions are in inches (mm.)  
(2) Tolerance (unless specified otherwise):  
.xx is ± 0.010 (.254)  
.xxx is ± .005 (.127)





Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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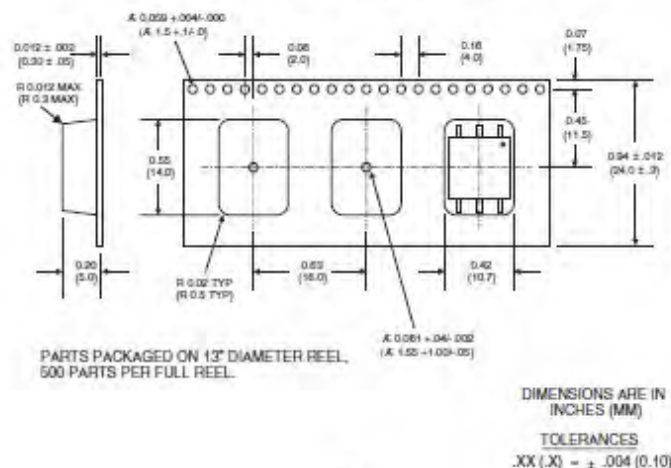
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TABLE 2. ELECTRICAL CHARACTERISTICS							
BETA P/N	TURNS RATIO	PRIMARY	SECONDARY	DC RESISTANCE $\Omega$ (MAX)	OUTPUT RISE TIME (MAX)	IMPEDANCE $\Omega$ (MIN)	
						75KHZ TO 249KHZ	250KHZ TO 1 MHZ
MLP-2033	1:3.75 $\pm$ 3%	1-3	4-8	(1-3) 0.25 (4-8) 3.00	250 ns	(4-8) 4,000	(4-8) 4,000
MLP-2005	1:2.50 $\pm$ 3%	1-3	4-8	(1-3) 1.5 (4-8) 3.5	250 ns	(4-8) 3,000	(4-8) 4,000
MLP-2012	1.25:1 $\pm$ 3%	1-3	4-8	(1-3) 2.4 (4-8) 1.5	150 ns	(1-3) 3,000	(1-3) 4,000
MLP-2015	1.41:1 $\pm$ 3%	1-3	4-8	(1-3) 2.7 (4-8) 2.2	150 ns	(1-3) 5,000	(1-3) 7,200
MLP-2016	1:3.00 $\pm$ 3%	1-3	4-8	(1-3) 0.35 (4-8) 3.50	250 ns	(4-8) 4,000	(4-8) 4,000
MLP-2030	1:2.65 $\pm$ 3%	1-3	4-8	(1-3) 0.29 (4-8) 1.10	250 ns	(4-8) 2,000	(4-8) 4,000
MLP-2233	1:2.70 $\pm$ 3%	1-3	5-7	(1-3) 0.25 (5-7) 2.00	250 ns	(5-7) 2,000	(5-7) 3,000
MLP-2205	1:1.79 $\pm$ 3%	1-3	5-7	(1-2) 2.6 (5-7) 1.3	150 ns	(5-7) 2,000	(5-7) 4,000
MLP-2212	1.66:1 $\pm$ 3%	1-3	5-7	(1-3) 2.4 (5-7) 1.5	150 ns	(1-3) 3,000	(1-3) 4,000
MLP-2215	2.00:1 $\pm$ 3%	1-3	5-7	(1-2) 2.6 (5-7) 1.3	150 ns	(1-3) 5,000	(1-3) 7,200
MLP-2216	1:2.15 $\pm$ 3%	1-3	5-7	(1-3) 0.35 (5-7) 2.50	250 ns	(5-7) 2,000	(5-7) 4,000
MLP-2230	1:2.07 $\pm$ 3%	1-3	5-7	(1-3) 0.29 (5-7) 0.82	250 ns	(5-7) 2,000	(5-7) 4,000

Note:

- These transformers have been classified as Level 5A per IPC-9503 and must be processed accordingly. To ensure product integrity and maintain the product warranty, these transformers require a 24 hour bake at +125° C prior to any solder reflow processing. Dried transformers must be reflowed within 24 hours. These parts are provided dry-packed in accordance with J-STD-033. Tape and Reel packaging is available upon request. Contact factory for further information. Reflow process must not cause the peak body temperature of the device to exceed 225° C and must not expose the device to temperatures above 183° C for more than 90 seconds.
- By providing surface mount parts that have been dried per IPC-9503 (Moisture Sensitivity Classification for Non-IC components) and Dry-Packed in accordance with J-STD-033 (Standard for handling, packing, shipping and use of Moisture/Reflow sensitive surface mount devices), Beta has significantly reduced the possibility of moisture sensitivity/reflow induced "Pop-corning" or Bulging during customer's reflow soldering process. Experiments performed by Beta and data provided by manufacturers of similar devices indicate that post reflow visual/mechanical anomalies can be reduced by more than 90%. Since customer reflow profiles and CCA density can vary, Beta recommends that the customer verify solder process compatibility and yield assessment of these devices.
- The Lead-Free/RoHS compliant versions use Sn10Pb88Ag02 for internal solder joints. High melting temperature solder in excess of 85% lead is exempt until a suitable alternative is available. The external lead finish is matte-tin with a nickel barrier layer that has been certified to pass JESD22A121.01 tin whisker limits. The magnet wire used has a minimum Thermo-plastic Flow rating of 250°C. These transformers are classified as IPC-9503 level 5A. The peak body temperature shall not exceed 245°C, and the time over 183°C shall not exceed 150 seconds. The Lead-Free/RoHS compliant part numbers are the standard part, with an "R" as the part number suffix. The bottom of the header has the Pb-free symbol embossed on it.

TAPE AND REEL MECHANICAL OUTLINE





**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



**Because Accuracy Matters™**

- 1 Mr. Ayers then attempted to Request a Quote for this item. He was able to add the item to
- 2 a quote request, however when getting ready to send the request, there was information
- 3 needed such as Platform (i.e., F-35, Apache, Etc.), Project information (i.e., AESA Radar,
- 4 Mission Computer, etc.) as required fields to fill out. As we didn't have this information, we
- 5 abandoned requesting a quote on this item.
- 6 For these reasons we rated the 32<sup>nd</sup> item on the sample list as **UNDETERMINED**.

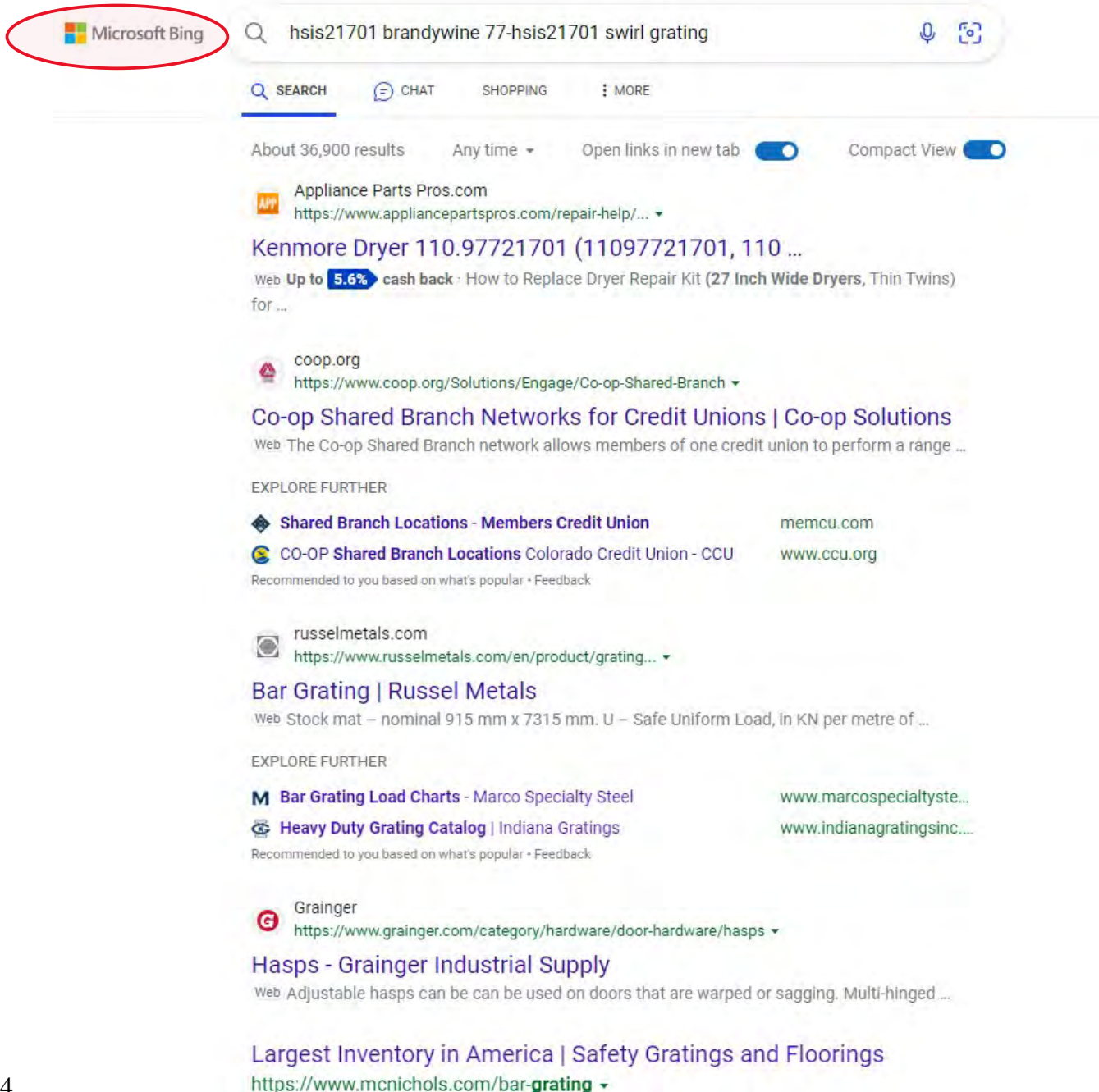
Robert Ayers, Project Manager, Norris Associates Technologies, LLC



**Because Accuracy Matters™**

1 **GG. BRANDYWINE 77-HSIS21701 GRATING, SWIRL, Master List Item 319**

- 2 Mr. Ayers performed an extensive search online looking for the listed item. Mr. Ayers  
3 found no direct or reasonable listings for this item.

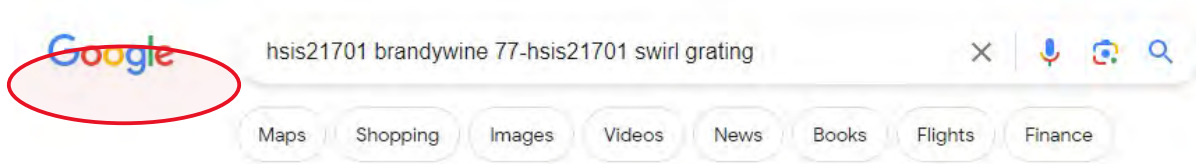


4

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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About 9 results (0.57 seconds)

Showing results for **hsi 21701** brandywine 77-**hsi 21701** swirl grating  
Search instead for hsis21701 brandywine 77-hsis21701 swirl grating

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Try using words that might appear on the page you're looking for. For example, "cake recipes" instead of "how to make a cake."

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You can also try these searches:

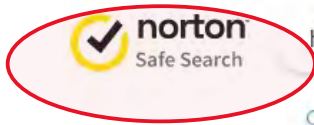
What is the meaning of the word grating?

What is grating in physics?

What is grating used for?

Robert Ayers, Project Manager, Norris Associates Technologies, LLC

**Because Accuracy Matters™**



hsis21701 brandywine 77-hsis21701 swirl grating

Web Videos News

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Make sure all words are spelled correctly  
Try different keywords  
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Try fewer keywords



hsis21701 brandywine 77-hsis21701 swirl grating

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Mr. Ayers then employed an Artificial Intelligence (AI) ChatGPT program to help identify the item in question. The following are the questions asked and answers given.

User

What is a Brandywine 77-HSIS21701 swirl grating?

ChatGPT

I'm sorry, but I couldn't find any information specific to a "Brandywine 77-HSIS21701 swirl grating" in my database. It's possible that this term refers to a specialized product or a proprietary item from a specific manufacturer or industry. Without further context or information, it's challenging to provide a detailed explanation. If you can provide additional details or clarify the context, I'll do my best to assist you further.

User

Is there a Brandywine company who makes swirl grating.

ChatGPT

I apologize for the confusion in my previous response. Yes, there is a company called Brandywine Drumlabels that manufactures swirl grating products. Brandywine Drumlabels specializes in providing labeling solutions for the chemical and hazardous materials industry, including drum labels and other related products.

However, I couldn't find any specific information about a "Brandywine 77-HSIS21701" swirl grating product. It's possible that the specific product code or model number you



**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



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mentioned may be proprietary to a certain industry or customer. If you have more details or specific requirements regarding the swirl grating, I recommend reaching out to Brandywine Drumlabels directly for accurate information and assistance.

User

what is a swirl grating?

ChatGPT

A swirl grating is a type of grating or grate that is designed with a swirling or spiral pattern on its surface. It is commonly used in drainage systems, such as in stormwater management, to capture and direct water flow while preventing debris from entering the drainage system.

The swirl pattern on the grating surface serves multiple purposes. It helps to increase the flow capacity of the grate by creating turbulence and preventing water from pooling on the surface. This design also aids in preventing clogging by minimizing the accumulation of leaves, trash, and other debris.

Swirl gratings are often made from durable materials such as stainless steel or cast iron to withstand the weight and traffic of vehicles or pedestrians. They are typically installed in areas where water runoff needs to be efficiently managed, such as parking lots, sidewalks, or roadways.

Overall, the primary function of swirl grating is to facilitate the efficient drainage of water while reducing the risk of clogs and blockages in the drainage system.

User

how are Brandywine Drumlabels swirl grating products typically labeled with part numbers?

ChatGPT

As an AI language model, I don't have access to specific information about Brandywine Drumlabels' labeling practices for swirl grating products. However, I can provide you with some general information on how part numbers are commonly used in labeling products.

Part numbers are alphanumeric codes assigned to specific products to uniquely identify them within a company's inventory or product catalog. These codes help streamline the ordering, tracking, and identification of products.

**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



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Typically, part numbers consist of a combination of letters, numbers, or both, and they can vary in length and format depending on the company's internal system. The specific format and structure of part numbers can differ between manufacturers.

In the case of Brandywine Drumlabels, they may have their own system for assigning part numbers to their swirl grating products. It's possible that the part number could include information about the specific swirl grating design, size, material, or other relevant attributes.

If you are looking for detailed information about Brandywine Drumlabels' specific part numbering system for swirl grating products, I recommend contacting the company directly. They will be able to provide you with accurate and up-to-date information on how their products are labeled and identified.

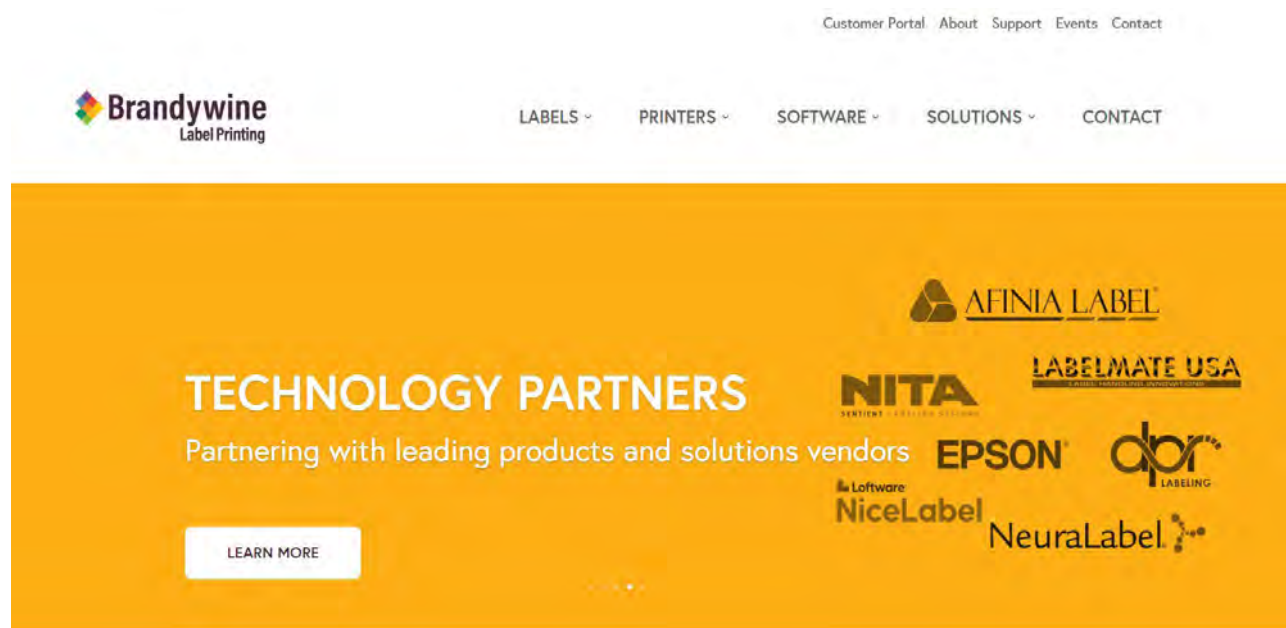
Mr. Ayers next searched for Brandywine Drumlabels and found the following.

The screenshot shows a Google search for "brandywine drumlabels". The search bar at the top contains the text "brandywine drumlabels" with a search icon to the right. Below the search bar are tabs for Maps, Images, News, Shopping, Videos, Books, Flights, and Finance. The search results show "About 3,690 results (0.63 seconds)". The first result is "Did you mean: brandywine drum labels" with a link to "drumlabels.com". The second result is "Label Printing | Brandywine" with a link to "http://www.drumlabe.com". The third result is "Contact Us | Brandywine" with a link to "https://www.brandywinedrumlabe.com". The fourth result is "Consumer & Industrial Product Labels" with a link to "https://brandywinelabelprinting.com". The fifth result is "About | Brandywine Label Printing" with a link to "https://brandywinelabelprinting.com/about-2". The sixth result is "Brandywine Drumlabels (@bwdrumlabs) ..." with a link to "https://www.instagram.com/bwdrumlabs". The knowledge panel on the right shows "Brandywine Drumlabels, LLC" as a company. It lists the parent organization as "Wausau Coated Products, Inc." and the founding year as "1997". It also includes a "Claim this knowledge panel" button and a "Feedback" link. Below the knowledge panel is a map showing the location of Brandywine Drumlabels at 7 Bala Ave, Bala Cynwyd, PA 19004. The map includes a street view and a "See outside" button. The knowledge panel also includes a "Website" button, a "Directions" button, and a "Save" button. It lists the address as "7 Bala Ave, Bala Cynwyd, PA 19004", the hours as "Closed - Opens 8:30 AM Tue", and the phone number as "(800) 807-2588". It also includes a "Suggest an edit" button and a "Own this business?" button.

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- 1
- 2 After researching on the Brandywine Drumlabels website, we were not able to determine if
- 3 this is the Brandywine referred to in the Exhibit A list.
- 4 For these reasons we rated the 33<sup>rd</sup> item on the sample list as **UNDETERMINED**.

**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



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- 1 **HH. DD72492300000B0 / QQ-N-286,UNS N05500, Master List Item 637**
- 2 **II. DD25315660000B0 / BAR, CDA NO.623 D25\*, Master List Item 597**
- 3 **JJ.DD72492330000B0 / BAR, UNS C63000 D90X, Master List Item 640**
- 4 The 34<sup>th</sup>, 35<sup>th</sup>, and 36<sup>th</sup> items are from TRI-TECH METALS INC and are thus rated as
- 5 **LIKELY.**



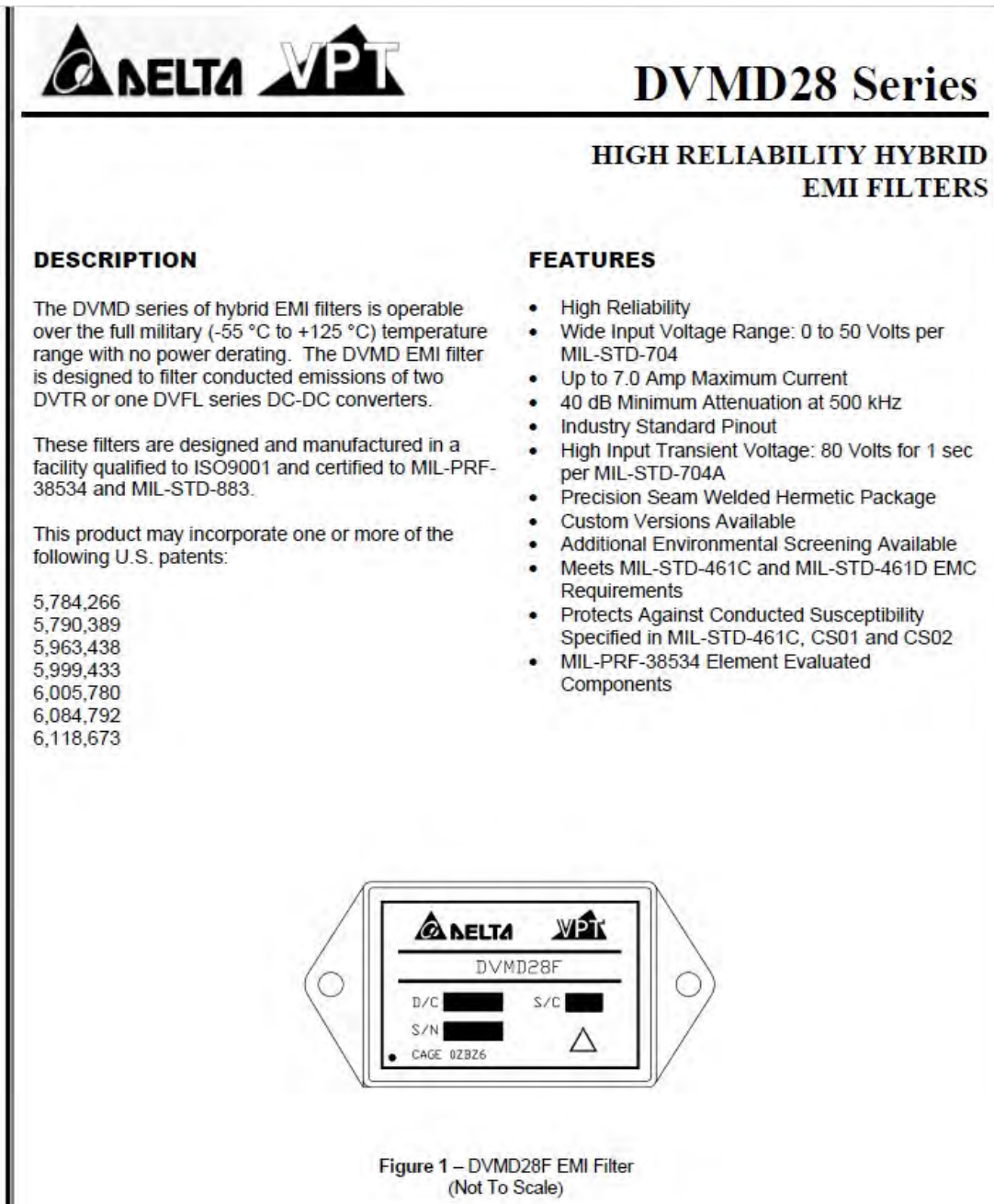
Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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1 **KK. PT DVMA28 HYBRID EMI FILTER, Master List Item 290**

2 Mr. Ayers was able to locate a description of the exact listed part.



3

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VPT, Inc. / VPT Products / Front End Modules & Accessories / DVMA28 EMI Filter

DVMA28 EMI Filter




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[Part Search](#)

Home > DVMA28

### DVMA28



**Mfg Part#** DVMA28  
**Part ID#** DVMA28  
**Last Updated:** 5/10/2023


**Qty Available:** [1 pcs](#)

**Price:** [Request Quote](#)

\* In-stock inventory can ship today if ordered by 2:00pm (PST). Available inventory can ship in 1-5 days depending on warehouse location. Call today and a sales rep can provide you price and delivery on Part# DVMA28

Additional components that start with: DV

DV30210GD167	DVD5LI	DVAA11E669
DVRPC16DVD300	DV74HCT32AN	DVHF2805SFHB
DV74HCT245AD	DVZK37K	DVS3PS35D
DV15CX	DV74LS169N	DV50G2
DV151A	DVRNTSEL	DV74NALS125AN
DV11A15D	DV74ALS244AD	DV2000TS1
DV1250	DV74HCT244A	DVRPC16300
DVD11LI	DV18250	DVF18167
DV2031S2	DVR16TT22TB	DVA17XP400
DV41182NP	DVR5TNDVD300	DV14004M

  
[Download Brochure](#)

**Certifications**

- ANSI/ESD S20.20 Certificate
- AS6081 Certification
- AS9100D Certification
- ASA Membership
- ERAI Membership
- FAA AC00-56B Accreditation
- GIDEP Membership
- IDEA Membership
- ISO 9001:2015 Certification
- ITAR Registration
- SMTA Membership

Hybrid Environmental Screening Options

1  
2 Mr. Ayers then researched to find a company with inventory in stock and found the follow-  
3 ing.  
4  
5

**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



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- 1 Mr. Ayers then sent in a Request for a Quote as shown and received the following.

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Use the form below to request a quote and a sales rep will contact you shortly with a response. For RFQ instructions [click here](#). If you have a Spreadsheet/BOM you can email your list to [rfq@4starelectronics.com](mailto:rfq@4starelectronics.com), or call (949) 276-5225 to speak to a sales associate now.

Mfg Part Number	Manufacturer	Quantity	Target Price (ea) USD	Need Parts By
DVMA28		10		Bid Only

[Add more parts here](#) [Add More Parts](#) [Remove Last Part](#)

**Contact Information:** Denotes Required Field

Your information will be auto-filled upon next request. To view our Privacy Policy [click here](#).

Company Name: Norris Associates  
Contact Name: Robert Ayers  
Phone: 18059627703 Ext. 2  
Fax: 18054562169  
Email: rayers@norris-associates.cc

Comments:

To prevent SPAM please answer this simple math problem: 6+1 = 7

**Submit Request**

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**BOEING Baxter GE EDISON INTERNATIONAL FLE**

I really appreciate you taking the initiative to send me the photo to ensure correct material. I will definitely keep you and your company in mind when I am in search of hard to find product.  
RR, Philips

Thanks for your help. The parts were received and the production line with our equipment is up and running. You guys were the only ones with these parts in stock.  
SF, Siemens

The capacitors that you sent fixed the problem and now our radar is functioning at 100%. Because of your reliability and quick response, you are my first choice for our next order.  
MD, US Navy

Mike was very helpful on a number of occasions and was always prompt when asked to expedite. My preferred supplier.  
TS, Raytheon

**ISO 9001 CERTIFICATION** **AS9100** **AS9100** **SMTA** **GIDEP** **ASA** **3A** **ID-CA** **ITAR** **eral** **DFARS**


2



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CategoriesQualityResourcesRequest Quote

Enter Mfg Part #Part Search

**Thank you.**


Your RFQ has been recieved, now its our turn to do some work...

We appreciate your patience while our team of global sourcing specialists scan our proprietary database of qualified suppliers and re-confirm the inventory. Once they have located the stock, you will receive a quote from an Account Manager that will include price(ea), lead-time, min order qty and other lot specific information. If you would like to place an order you can fax/email us a PO or call your Account Manager and we will process your order over the phone.

Please give us a few hours to work on your request, we will be in touch.












Sincerely,


**4 Star Electronics, Inc.**  
Customer Support Team



Did you know that ALL our quotes include:

- \* **Authenticity Guarantee** - All parts sold are screened for authenticity in-house at NO extra-charge!
- \* **Price Match Guarantee** - We will meet or beat any quote, just send us a copy of your best quote.
- \* **Peace-of-Mind** - Relax. We have been doing this for over 20yrs, if the parts exist, we will deliver them.





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Resources

- Request Quote
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- Part Types
- Ordering Info
- Inventory Catalog
- In-Stock Inventory
- Full Parts Listing

Information

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- Line Card
- Terms & Conditions
- Privacy Policy
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1

Norris Associates Technologies, LLC

Page 94 of 167 Airtech vs Yim et al Expert Witness Report



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## QUOTATION

RESALE #	FED TAX ID #	DATE	QUOTE#
SR EAA 100-223166	90-0074391	05/12/23	1140884
DNB #	CAGE CODE #	SALES PERSON	
10-297-6797	3DSR9	DAVID SHARPE	

CONTACT	COMPANY	PHONE	EXT	FAX
ROBERT AYERS	NORRIS ASSOCIATES	18059627703		18054662169

### NOTES

THANK YOU FOR THE OPPORTUNITY TO QUOTE YOUR REQUIREMENTS. PLEASE CONTACT ME DIRECTLY IF YOU HAVE ANY QUESTIONS ABOUT THIS QUOTE AT THE FOLLOWING: [DAVID@4STARELECTRONICS.COM](mailto:DAVID@4STARELECTRONICS.COM) OR 949-276-8806.

QTY	PART #	MFG	D/C	N/R/P	L/T	PRICE(each)	NOTES
4	DVMA28	DELTA	N/A	NEW	4-5 DAYS	\$337.7500	4 PCS ONLY

### ORDERING INFORMATION >

TO PLACE AN ORDER PLEASE CONTACT YOUR ACCOUNT MANAGER (CONTACT INFORMATION BELOW).  
ALL ORDERS REQUIRE A SIGNED PURCHASE ORDER (EITHER A HARD COPY P.O. OR CREDIT CARD FORM).  
TO DOWNLOAD OUR CREDIT CARD FORM GO TO: [WWW.4STARELECTRONICS.COM/DOWNLOADS.ASP](http://WWW.4STARELECTRONICS.COM/DOWNLOADS.ASP)  
FOR COMPLETE ORDERING DETAILS GO TO: [WWW.4STARELECTRONICS.COM/ORDERING\\_INFO.ASP](http://WWW.4STARELECTRONICS.COM/ORDERING_INFO.ASP)

### NCNR POLICY >

DO TO CURRENT MARKET CONDITIONS, ALL ORDERS WILL BE NON-CANCELABLE AND NON-RETURNABLE  
UNLESS PARTS FAIL TO MEET FORM, FIT AND FUNCTION PER THE MANUFACTURER'S DATA SHEET.

### LOW PRICE GUARANTEE!

4 STAR ELECTRONICS WILL BEAT ANY REASONABLE QUOTE! SO IF YOU RECEIVE A BETTER QUOTE,  
PLEASE GIVE US A CALL AND WE WILL DO OUR BEST TO MEET OR BEAT YOUR BEST QUOTE.

DAVID SHARPE | PH (949) 276-8806 | FX (949) 240-8503 | [DAVID@4STARELECTRONICS.COM](mailto:DAVID@4STARELECTRONICS.COM)



1 For those reasons we rated the 37<sup>th</sup> item on the sample list as **EASY**

**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



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- 1 **LL. DD25319960000B0 / BAR, CDA NO.623 D40\*, Master List Item 599**
- 2 **MM. DD21248000030B0 / BAR UNS G10700 D15.9, Master List Item 522**
- 3 **NN. DD25937844030B0 / BAR, UNS S17400 D15X, Master List Item 613**
- 4 The 34<sup>th</sup>, 35<sup>th</sup>, and 36<sup>th</sup> items are from TRI-TECH METALS INC and are thus rated as
- 5 **LIKELY.**


Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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**OO. STEADFAST RHFLVDS32AK01V Rad-Hard Quad, Low-Voltage Differential Signaling (LVDS) Receiver, Master List Item 429**

Mr. Ayers was able to locate a description of the exact listed part.



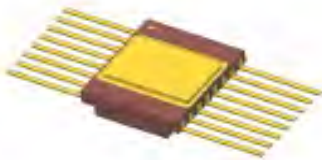
# RHFLVDS32A

---

## Rad-hard quad LVDS receivers

---

Datasheet - production data



**Ceramic Flat-16**

*The upper metallic lid is electrically connected to ground*

- Large input common mode: -4 V to +5 V
- Guaranteed up to 300 krad TID
- SEL immune up to 135 MeV.cm<sup>2</sup>/mg
- SET/SEU immune up to 32 MeV.cm<sup>2</sup>/mg

### Description

The RHFLVDS32A is a quad, low-voltage differential signaling (LVDS) receiver specifically designed, packaged and qualified for use in aerospace environments in a low-power and fast data transmission standard.

The circuit features an internal fail-safe function to ensure a known state in case of an input short circuit or a floating input.

All pins have cold spare buffers to ensure they are in high impedance when V<sub>CC</sub> is tied to GND.

Designed on ST's proprietary CMOS process with specific mitigation techniques, the RHFLVDS32A achieves "best in the class" for hardness to total ionisation dose and heavy ions.

The RHFLVDS32A can operate over a large temperature range of -55 °C to +125 °C and it is housed in an hermetic Ceramic Flat-16 package.

### Features

- LVDS input
- CMOS output
- ANSI TIA/EIA-844 compliant
- 400 Mbps (200 MHz)
- Cold spare on all pins
- Fail-safe function
- 3.3 V operating power supply
- 4.8 V absolute rating
- Power consumption: 43 mW at 3.3 V
- Hermetic package

**Table 1. Device summary**

Reference	SMD pin	Quality level	Package	Lead finish	Mass	EPPL <sup>(1)</sup>	Temp. range
RHFLVDS32AK1	-	Engineering model	Ceramic Flat-16	Gold	0.65 g	-	-55 °C to 125 °C
RHFLVDS32AK01V	5962F98652	QML-V Flight				Target	

1. EPPL = ESA preferred part list

April 2017

DocID025371 Rev 4

1/15

This is information on a product in full production.

[www.st.com](http://www.st.com)

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RHFLVDS32A

Functional description

1 Functional description

Figure 1. Logic diagram and logic symbol

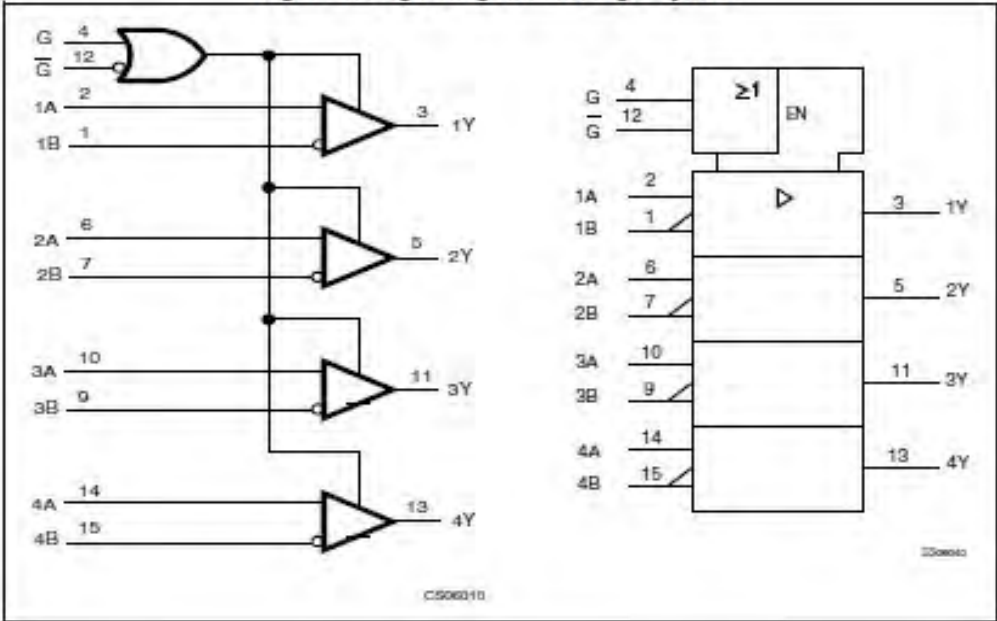


Table 2. Truth table

Differential inputs	Enables		Output
A, B	G	$\overline{G}$	Y
$V_{ID} \geq 100 \text{ mV}$	H	X	H
	X	L	H
$-100 \text{ mV} < V_{ID} < 100 \text{ mV}$	H	X	?
	X	L	?
$V_{ID} \leq -100 \text{ mV}$	H	X	L
	X	L	L
X	L	H	Z
Open/Short or terminated	H	X	H
	X	L	H

Note: 1 The G input features an internal pull-up network. The  $\overline{G}$  input features an internal pull-down network. If they are floating the circuit is enabled.

2  $V_{ID} = V_{IA} - V_{IB}$

3 L = low level, H = high Level, X = irrelevant, Z = high impedance (off). ? = intermediate



DocID025371 Rev 4

3/15



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Pin configuration

RHFLVDS32A

## 2 Pin configuration

Figure 2. Pin connections (top view)

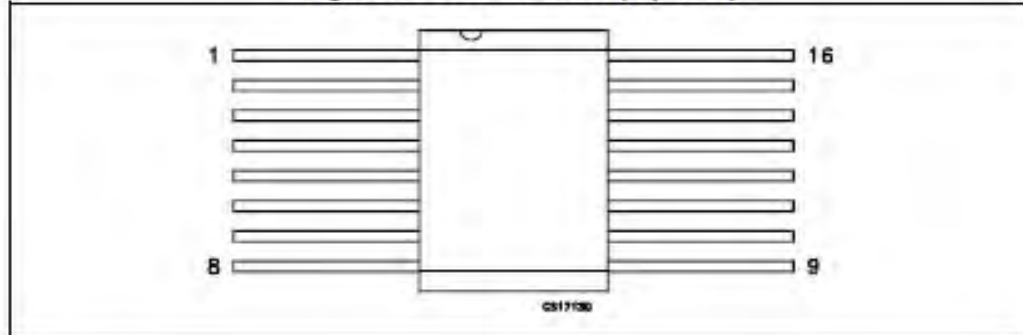


Table 3. Pin description

Pin number	Symbol	Name and function
2, 6, 10, 14	1A to 4A	Receiver inputs
1, 7, 9, 15	1B to 4B	Negated receiver inputs
3, 5, 11, 13	1Y to 4Y	Receiver outputs
4	G	Enable
12	$\overline{G}$	
8	GND	Ground
16	V <sub>CC</sub>	Supply voltage

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RHFLVDS32A

Maximum ratings and operating conditions

### 3 Maximum ratings and operating conditions

Absolute maximum ratings are those values beyond which damage to the device may occur. Functional operation under these conditions is not implied.

Table 4. Absolute maximum ratings

Symbol	Parameter	Value	Unit
V <sub>CC</sub>	Supply voltage <sup>(1)</sup>	4.8	V
V <sub>I</sub>	TTL inputs (operating or cold-spare)	-0.3 to 4.8	
V <sub>CM</sub>	LVDS common mode (operating or cold-spare)	-5 to +6	
V <sub>OUT</sub>	TTL outputs (operating or cold-spare)	-0.3 to 4.8	
T <sub>stg</sub>	Storage temperature range	-65 to +150	°C
T <sub>J</sub>	Maximum junction temperature	+150	
R <sub>thjc</sub>	Thermal resistance junction to case <sup>(2)</sup>	22	°C/W
ESD	HBM: Human body model		
	– All pins excepted LVDS inputs	2	kV
	– LVDS inputs vs. GND	8	
	CDM: Machine model	500	V

1. All voltages, except differential I/O bus voltage, are with respect to the network ground terminal.
2. Short-circuits can cause excessive heating. Destructive dissipation can result from short-circuits on the amplifiers.

Table 5. Operating conditions

Symbol	Parameter	Min.	Typ.	Max.	Unit
V <sub>CC</sub>	Supply voltage	3	3.3	3.6	V
V <sub>CM</sub>	Static common mode on the receiver	-4		+5	
T <sub>A</sub>	Ambient temperature range	-55		+125	°C



DocID025371 Rev 4

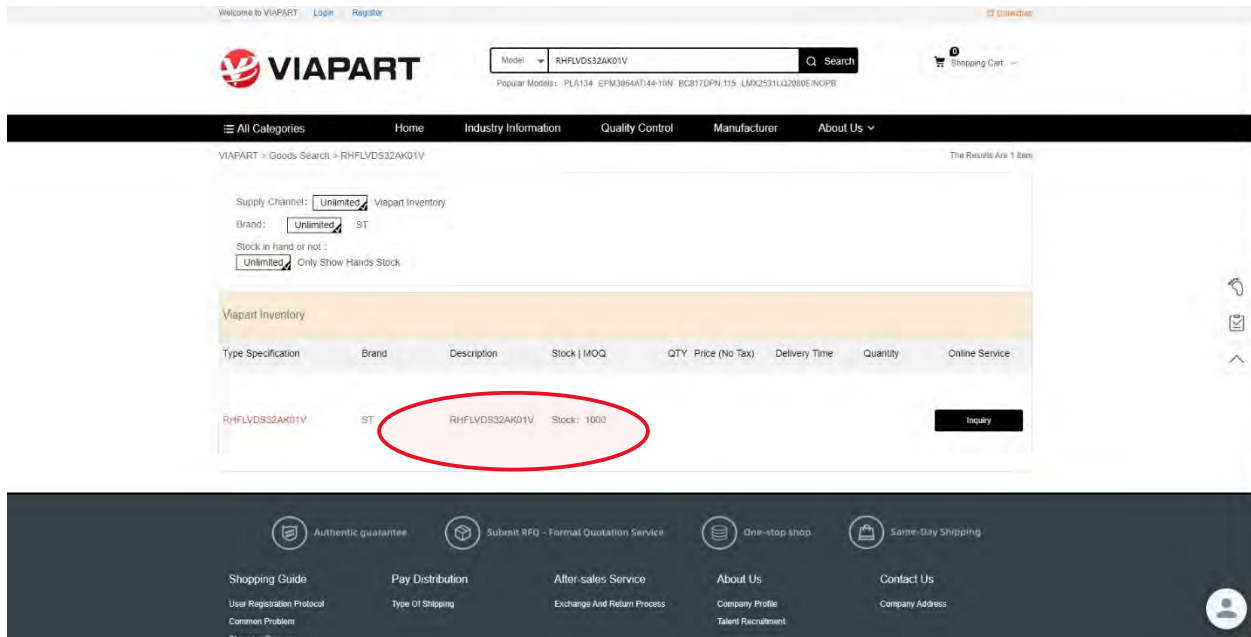
5/15

**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



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- 1 After performing further research, Mr. Ayers located a source with a substantial inventory
- 2 of this exact part.



- 3 Mr. Ayers proceeded to prepare a Request For Quote and submitted the request to sev-
- 4 eral sources which showed inventory. Currently, we are waiting for responses to our re-
- 5 quests.
- 6 Based on finding available inventory, we rated the 41<sup>st</sup> item on the sample list as **EASY**.

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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1 **PP. DOWKEY MICROWAVE 401-220832A SINGLE POLE DOUBLE THROW (SPDT)**  
2 **RADIO FREQUENCY (RF) SWITCH, Master List Item 15**

3 Mr. Ayers was able to locate the datasheet for the exact part.

**401 Series SPDT Failsafe**

**SMA, PC Mount**



<b>C</b> Commercial	<b>M</b> Military	<b>A</b> Avionics	<b>S</b> Space
------------------------	----------------------	----------------------	-------------------

**RF Characteristics**



Frequency GHz	VSWR (max)	Isolation dB (min)	Ins. Loss dB (max)
0-1	1.10	85	0.10
1-4	1.15	80	0.15
4-8	1.20	70	0.20
8-12	1.30	65	0.30
12-18	1.35	60	0.35
*18-26.5	1.50	55	0.50

\*"K" option only. Ex: 401K-2208  
Note: Typical performance dependent on selected options

**401 Series SPDT Failsafe, SMA**

**Mechanical**

**Specifications**

**Operating Voltage:**  
(across temperature range)  
12 Vdc (11-14 Vdc)  
28 Vdc (24-32 Vdc)

**Coil Current (max @ nom.Vdc & 20°C):**  
12 Vdc 195 mA  
28 Vdc 95 mA

**Switching Time:**  
15 mS maximum

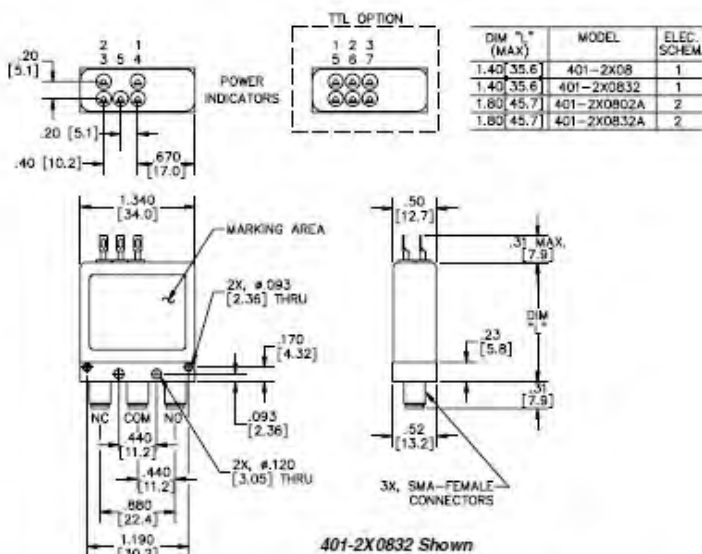
**Operating Temperature:**  
-25°C to +65°C (Standard)  
-55°C to +85°C (Extended "T" Option)

**Mechanical Life, Cycles:**  
1,000,000 minimum

**Vibration, Operating:**  
10G RMS, 20-2000 Hz

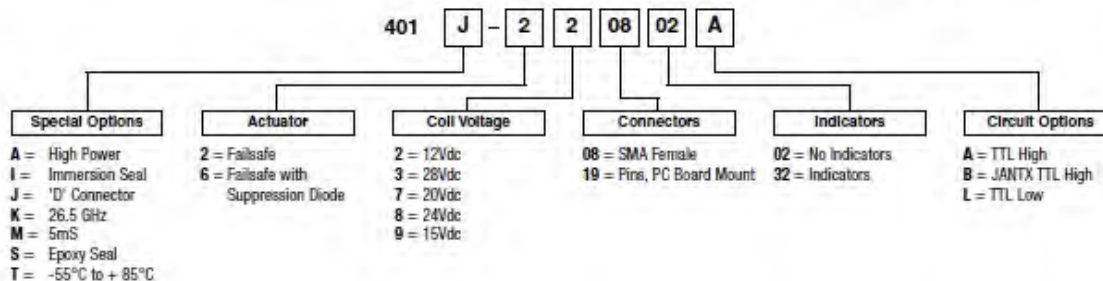
**Mechanical Shock, Non-Operating:**  
50G, 1/2 Sine, 11mS

**Nominal Weight:**  
2.5 oz., (71g.)



**Part Number Selection**

For Electrical Schematic  
see page # 1-5





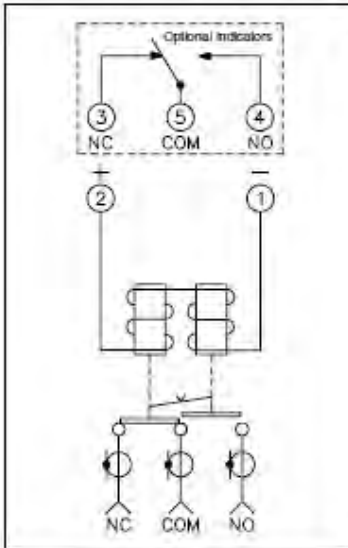
Robert Ayers, Project Manager, Norris Associates Technologies, LLC



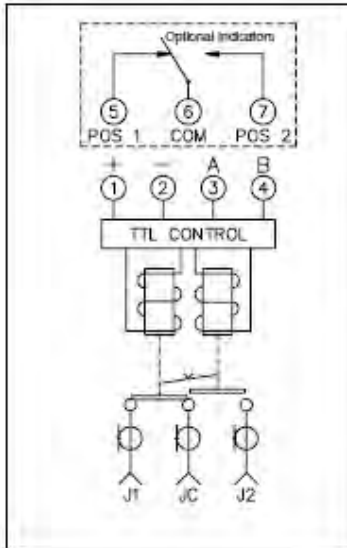
**Because Accuracy Matters™**



**1 401/403 Fallsafe**



**2 401/403 Fallsafe TTL**



**LOGIC TRUTH TABLE**

FAILSAFE TTL - SCH #2

LOGIC TRUTH TABLE		
RF PATH	INDICATOR PATH	LOGIC INPUT "A"
NC-COM	NC-COM	0
NO-COM	NO-COM	1

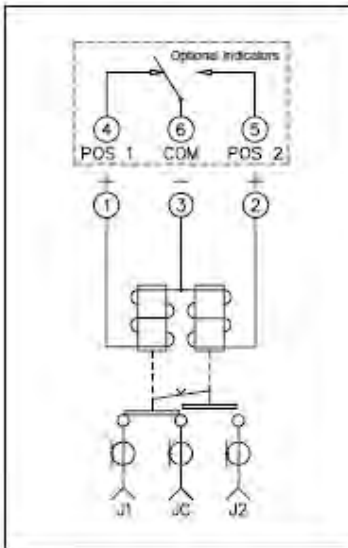
\*0\* = 0.0V-0.8V  
 \*1\* = 2.4V-5.5V

SELF CUTOFF TTL - SCH #5

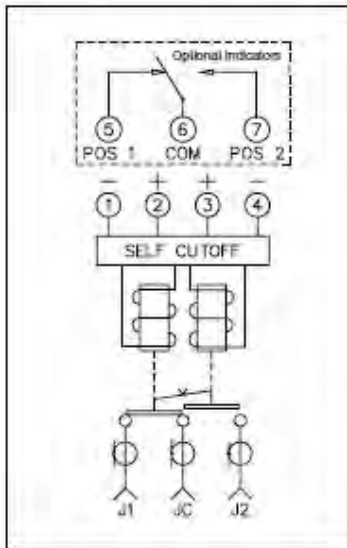
LOGIC TRUTH TABLE			
RF PATH	INDICATOR PATH	LOGIC INPUT "A"	LOGIC INPUT "B"
JC-J1	COM-1	1	0
JC-J2	COM-2	0	1

\*0\* = 0.0V-0.8V  
 \*1\* = 2.4V-5.5V

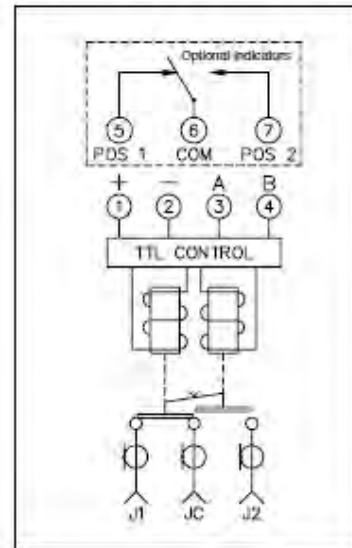
**3 401 Pulse Latch**



**4 401 Self Cutoff**



**5 401 Self Cutoff TTL**



Robert Ayers, Project Manager, Norris Associates Technologies, LLC



**Because Accuracy Matters™**

- 1 Mr. Ayers found this exact part listed for sale on eBay by multiple vendors, including some
- 2 who were out of stock when we looked and some who were not.

This item is out of stock.

**401-220832A - DOW-KEY MICROWAVE - DC-18GHZ 12V SPDT RF switch**

Condition: New - Open box

Price: **US \$128.40**  
[No interest if paid in full in 6 mo on \\$99+\\*](#)

Shipping: **US \$12.95 Economy Shipping. [See details](#)**  
Located in: US, United States

Delivery: Estimated between Sat, May 13 and Tue, May 16 to 93116

Returns: Seller does not accept returns. [See details](#)

Payments:

**PayPal CREDIT**  
\*No interest if paid in full in 6 months on \$99+. [See terms and apply.](#)  
DOW  
 Earn up to 5x points when you use your eBay Mastercard®. [Learn more](#)

Shop with confidence  
eBay Money Back Guarantee  
Get the item you ordered or get your money back. [Learn more](#)

**Seller information**  
[semiconductor5000om](#) (642 ★)  
99.5% positive feedback  
[Save seller](#)  
[Contact seller](#)  
[Visit store](#)  
[See other items](#)

[Have one to sell?](#) [Sell now](#)

**Dow-Key Good Dow-key 401-2208 ROHS RF Relay 4012208 12V RF**

Condition: Used  
\*\*Scarce items. 100% quality.\*\*

Quantity:  2 available / 14 sold

Price: **US \$55.00**

[Buy It Now](#)  
[Add to cart](#)  
[Make offer](#)  
[Add to Watchlist](#)

Best Offer:

5 watchers

Shipping: **US \$3.00 SpeedPAK Standard. [See details](#)**  
International shipment of items may be subject to customs processing and additional charges.  
Located in: 深圳, 广东省, China

Delivery: Estimated between Tue, May 23 and Thu, May 25 to 93116  
Please allow additional time if international delivery is subject to customs processing.

Returns: Seller does not accept returns. [See details](#)

Payments:

Earn up to 5x points when you use your eBay Mastercard®. [Learn more](#)

Shop with confidence  
eBay Money Back Guarantee  
Get the item you ordered or get your money back. [Learn more](#)

**Seller information**  
[xihu888](#) (223 ★)  
99.3% positive feedback  
[Save seller](#)  
[Contact seller](#)  
[Visit store](#)  
[See other items](#)

[Have one to sell?](#) [Sell now](#)

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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1 He also found the part available from other suppliers.

The screenshot shows the RF Parts Company website. The header includes the company logo, contact information (1-800-RF PARTS, 1-760-744-0700), and navigation links (Home, Product Listing, My Cart, My Account, Log In). A search bar is present with a "GO" button and a link to "Advanced Search". Below the search bar, a message states: "Not finding what you are searching for. Try a partial part number." The main content area displays the product title "401-420832A-2 Dow-Key Microwave SPDT Coaxial Relay (NOS)" and a "MADE IN USA" badge with an American flag. The price is listed as \$89.91, and the item is "In Stock". A quantity selector is set to 1, and there is an "ADD TO CART" button. The product image shows a gold-colored relay with SMA connectors and a ribbon cable. Technical specifications are listed on the right side of the page.

Switch Type: Nontransfer  
Operating Temp Rang: -55.0/+95.0 deg celsius  
Coaxial Connector Series Designation: SMA  
Connector End Design: Female  
Maximum Operating Altitude Rating: 50000.0 feet  
Switch Return Mechanism Type: Latching  
RF Maximum Voltage Rating: 350.0 volts rms  
Coupling Position Quantity: 3  
Precious Material and Location: Contacts gold  
Precious Material: GOLD  
Supplementary Features: Coil voltage 20.0 min; switching time 20 msec at 20 vdc; driver  
Terminal Type and Quantity: 8 solder stud  
New Old Stock \* No longer available for export

2  
3 For those reasons we have rated the 42<sup>nd</sup> item on the sample list as **EASY**.

**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



**Because Accuracy Matters™**

- 1 **QQ. DD28599380000B0 / BAR, CDA NO.624 D70\*, Master List Item 618**
- 2 The 43<sup>rd</sup> item is from TRI-TECH METALS INC and is thus rated as **LIKELY**.



Robert Ayers, Project Manager, Norris Associates Technologies, LLC



**Because Accuracy Matters™**

1 **RR. DOWKEY MICROWAVE 441J-420803A, RF SWITCH/RELAY, Master List Item**  
2 **106**

3 Mr. Ayers performed several searches for this part and was not able to locate an exact  
4 part. He did find similar parts available through DigiChip.com and on eBay.

5

**DigiChip.com**  
Electronics components database

Search Circuit: Type part number  
Section: Distributor / Supplier  
Search Log In

**Search datasheet**  
Buy / Find supplier  
Parametric search  
New parts / circuits  
Cross reference  
Application notes  
Others  
Change language  
Contact

**Details, datasheet, quote on part number: 441-420802A**

Part: 441-420802A  
Category: RF and Microwave => RF Switches  
Title: 0 MHz - 18000 MHz RF/MICROWAVE SGL POLE FOUR THROW SWITCH, 0.5 dB INSERTION LOSS  
Description:  
Company: Dow-Key Microwave Corporation  
Datasheet: [Download 441-420802A Datasheet](#)

**Specifications**

Frequency Range	0.0 to 18000 MHz
Insertion Loss	0.5000 dB
VSWR	1.5 1
Type	Single Pole Four Throw
Operating Temperature	-25 to 65 C (-13 to 149 F)

**Features, Applications**

Operating Voltage: (across temperature range) 12 Vdc (11-14 Vdc) 28 Vdc (24-32 Vdc) Coil Current (max @ nom. Vdc 20°C): 12 Vdc mA 28 Vdc 200 mA  
Switching Time: 15 mS maximum Operating Temperature: to +65°C (Standard) to +85°C (Extended "T" Option) Mechanical Life: Cycles: 1,000,000 minimum  
Vibration, Operating: 10 G RMS, 20-2000 Hz Mechanical Shock, Non-Operating: G: 1/2 Sine, 11 mS Nominal Weight: 11 oz. (312g.)  
L = Flange Mount P = Power Plug R = Com S = Epoxy Seal +85° C

6

**DigiChip.com**  
Electronics components database

Search Circuit: 441J-420803A  
Section: Distributor / Supplier  
Search Log In

**Search datasheet**  
Buy / Find supplier  
Parametric search  
New parts / circuits  
Cross reference  
Application notes  
Others  
Change language  
Contact

**Find supplier - Request For Quote**

Search distributor result found for: 441J-420803A

Select the checkbox items you want to buy or to ask for price then click on this button => [Submit](#)

Part number	Distributor	Stock	DC	Manufacturer	Description
<input checked="" type="checkbox"/> 441J-420822A	Depu Electronics Co., Ltd	5000	2021	Dow-Key	-
	New Strength Electronic Co.,li	0	-	-	-
	Lkrelec	2500	19	DOW-KEY	-

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Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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**ebay** Shop by category  All Categories  Advanced

[Back to previous page](#) | Listed in category: Other Consumer Electronics [Share](#) | [Add to Watchlist](#)



**DOWKEY MICROWAVE 441J-420822A DC-18 GHz SP4T RF SWITCH / RELAY**

Condition: Used

Price: **US \$69.99**

[Buy It Now](#)

[Add to cart](#)

Best Offer:

[Make offer](#)

[Add to Watchlist](#)

Additional service available

☐ 1-year protection plan from Allstate - \$10.99

**Returns accepted**

Shipping: US \$25.00 Economy Shipping from outside US. [See details](#)  
 International shipment of items may be subject to customs processing and additional charges.   
 Located in: SHANGHAI, China

Delivery: Estimated between **Mon, Jun 12** and **Tue, Aug 6** to 93116   
 This item has an extended handling time and a delivery estimate greater than 26 business days.  
 Please allow additional time if international delivery is subject to customs processing.

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**Seller information**  
 tommy\_chou (116 )  
 100% positive feedback

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## 431-461 Series Latching

**SMA**



<b>C</b> Commercial	<b>M</b> Military	<b>A</b> Aerospace	<b>S</b> Space
------------------------	----------------------	-----------------------	-------------------

### RF Characteristics

Frequency GHz	VSWR (max)	Isolation dB (min)	Ins. Loss dB (max)
DC-4	1.20	80	0.20
4-8	1.30	75	0.30
8-12.4	1.40	70	0.40
12.4-18	1.50	60	0.50
*18-22	1.60	60	0.60
*22-26	1.60	55	0.60

\* "K" option only

## 461 Latching Series, SMA

### Specifications

**Operating Voltage:**  
 (across temperature range)  
 12 Vdc (11-14 Vdc)  
 28 Vdc (24-32 Vdc)

**Coil Current (max @ nom. Vdc & 20°C):**  
 12 Vdc 375 mA  
 28 Vdc 200 mA

**Switching Time:**  
 15 mS maximum

**Operating Temperature:**  
 -25°C to +65°C (Standard)  
 -55°C to +85°C (Extended "T" Option)

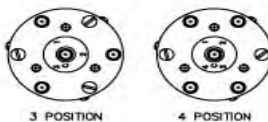
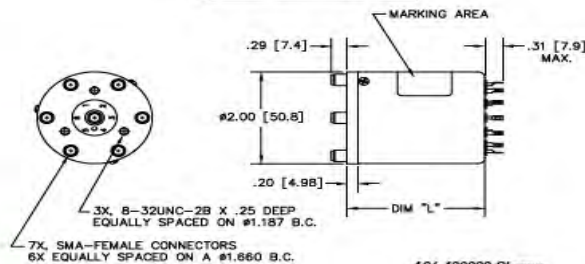
**Mechanical Life, Cycles:**  
 1,000,000 minimum

**Vibration, Operating:**  
 10 G RMS, 20-2000 Hz

**Mechanical Shock, Non-Operating:**  
 50 G, 1/2 Sine, 11 mS

**Nominal Weight:**  
 11 oz., (312g.)

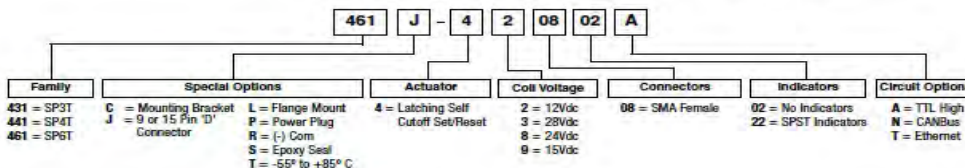
### Mechanical



DIM "L" (MAX)	MODEL	ELEC. SCHEM.
2.40 [61.0]	4X1-4X08	1
2.70 [68.6]	4X1-4X0822	1
2.70 [68.6]	4X1-4X0802A	2
3.00 [76.2]	4X1-4X0822A	2

### Part Number Selection

For Electrical Schematic see page # 3-17



**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



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1  
2 While these RF Relays are similar, there are several key differences.  
3 The 441J-420803A (specified part) is a Dow-Key Microwave SPDT RF relay that operates  
4 from DC to 18 GHz. It has a switching time of 15 ms and an insertion loss of 0.2 dB. The  
5 relay has a maximum power of 100 W and can handle up to 2 A of current.  
6 The 441J-420822A (similar part) is a Dow-Key Microwave SP4T RF switch that operates  
7 from DC to 18 GHz. It has an insertion loss of 0.5 dB and a VSWR of 1.5:1. The switch  
8 has a maximum power of 100 W and can handle up to 200 mA of current at 28 Vdc.  
9 The 441J-420802A (similar part) is a Dow-Key Microwave SP4T RF switch that operates  
10 from DC to 18 GHz. It has an insertion loss of 0.5 dB and a VSWR of 1.5:1. The switch  
11 has a maximum power of 100 W and can handle up to 200 mA of current at 28 Vdc.  
12 Because we were not able to locate an exact or similar Form, Fit, and Function part easily,  
13 we have rated the 44<sup>th</sup> item on the sample list as HARD.  
14

**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



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**RESERVATION OF RIGHTS**

We reserve the right to amend or augment our opinions and discussions in the above report based on any new information that may become known, including but not limited to information brought by participants in this case, subsequent research of our own, or information from other reliable and legally proper sources. We further reserve the right to modify the scope of this or other communications we may have in conjunction with this matter, based on information then available.


**DISCLAIMER**

We are not attorneys, and thus, we have not, and will not, offer opinions of law.

We declare under penalty of perjury, under the laws of California, that the foregoing is true and correct.

Dated: 18 May 2023, at Santa Barbara, California.

  
Robert Ayers

  
Wayne B. Norris





Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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**Audio Recordings**



**Forensic Accounting  
Fraud Detection**

**Intellectual Property:  
Patents / Copyrights  
Trademarks**



**Valuations of Technology  
And Intellectual Property**



**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**

***Because Accuracy Matters™***



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**LinkedIn** <https://www.linkedin.com/in/wayne-norris-193b88>

**APPENDIX 1 – MASTER LIST OF ITEMS**

This is the list of items originally delivered to us.

7/19/2022

**Exhibit A – Airtech Proprietary and Other Protected Products - Confidential**

No	Name	Item	Description	CUSTOMER	Program	Category
1	Scheerer Bearing	10189/1060	Bearing	HANWHA	MSAM	Exclusive Letter
2	Scheerer Bearing	13189/1060	Bearing	HANWHA	MSAM	Exclusive Letter
3	CPI	BLP2018	Receiver Protector	HANWHA, QNION	MSAM	Exclusive Letter
4	Cambridge	6M848	Mirror	HANWHA	NGMBT	Exclusive Letter
5	Cambridge	6231HL848	Scanner	HANWHA	NGMBT	Exclusive Letter
6	Coil Winding	CWS-1SN-11905	Coil	HANWHA	Spider	Byungchan Yim Confirmation
7	B.E.Meyer	428-UAV-227-2	Laser Sensor	HANWHA	KFX	Technical Assistance agreement
8	Atlantic Gasket	60763548	Pad	HANWHA	K1	Byungchan Yim Confirmation
9	Atlantic Gasket	60763549	Pad	HANWHA	K1	Byungchan Yim Confirmation
10	P3 America	MCP22/7734	Potentiometer	HANWHA	KHP	Byungchan Yim Confirmation
11	DOWKEY MICROWAVE	101-2308	RF-Switch	Not under eleven customer		Exclusive agreement
12	DOWKEY MICROWAVE	401-2208	RF Switch	Not under eleven customer		Exclusive agreement
13	DOWKEY MICROWAVE	401-220802A	RF Switch	Not under eleven customer		Exclusive agreement
14	DOWKEY MICROWAVE	401-220802A-ROHS	RF-Switch	Not under eleven customer		Exclusive agreement
15	DOWKEY MICROWAVE	401-220832A	SPDT	Not under eleven customer		Exclusive agreement
16	DOWKEY MICROWAVE	401-220832L	RF Switch	Not under eleven customer		Exclusive agreement
17	DOWKEY MICROWAVE	401-220832L-1	RF Switch	Not under eleven customer		Exclusive agreement
18	DOWKEY MICROWAVE	401-2308	SW-MS-F-28-SMA	Not under eleven customer		Exclusive agreement
19	DOWKEY MICROWAVE	401-230802A	RF-Switch	Not under eleven customer		Exclusive agreement
20	DOWKEY MICROWAVE	401-230832A	RF-Switching	Not under eleven customer		Exclusive agreement
21	DOWKEY MICROWAVE	401-2308-ROHS	RF-Switch	Not under eleven customer		Exclusive agreement
22	DOWKEY MICROWAVE	401-2808	RF-Switch	Not under eleven customer		Exclusive agreement
23	DOWKEY MICROWAVE	401-2808-ROHS	RF-Switch	Not under eleven customer		Exclusive agreement
24	DOWKEY MICROWAVE	401-290802A	RF-Switch	Not under eleven customer		Exclusive agreement
25	DOWKEY MICROWAVE	401-290802A-SETUP	SET-UP FEE	Not under eleven customer		Exclusive agreement
26	DOWKEY MICROWAVE	401-420802A	RF-Switch	Not under eleven customer		Exclusive agreement
27	DOWKEY MICROWAVE	401-420802S	RF-Switch	Not under eleven customer		Exclusive agreement
28	DOWKEY MICROWAVE	401-420832A	RF-Switch	Not under eleven customer		Exclusive agreement
29	DOWKEY MICROWAVE	401-420832A-ROHS	RF-Switch	Not under eleven customer		Exclusive agreement
30	DOWKEY MICROWAVE	401-4308	RF-Switch	Not under eleven customer		Exclusive agreement
31	DOWKEY MICROWAVE	401-430802A	RF-Switch	Not under eleven customer		Exclusive agreement
32	DOWKEY MICROWAVE	401-430832	RF Switch	Not under eleven customer		Exclusive agreement
33	DOWKEY MICROWAVE	401-480832	RF Switch	Not under eleven customer		Exclusive agreement
34	DOWKEY MICROWAVE	401-490802A	RF Switch	Not under eleven customer		Exclusive agreement
35	DOWKEY MICROWAVE	401-490832A	RF Switch	Not under eleven customer		Exclusive agreement
36	DOWKEY MICROWAVE	401-6208	RF-Switch	Not under eleven customer		Exclusive agreement
37	DOWKEY MICROWAVE	401-620832	RF-Switch	Not under eleven customer		Exclusive agreement
38	DOWKEY MICROWAVE	401A-2208	RF Switch	Not under eleven customer		Exclusive agreement
39	DOWKEY MICROWAVE	401A-4208	SW,PMS-L-12-SMA	Not under eleven customer		Exclusive agreement
40	DOWKEY MICROWAVE	401AIT-280832	RF Switch	Not under eleven customer		Exclusive agreement
41	DOWKEY MICROWAVE	401J-220832A	Coaxial Switch, DC ~	Not under eleven customer		Exclusive agreement
42	DOWKEY MICROWAVE	401J-2308	SW, MS-F-28-SMA-DE9P	Not under eleven customer		Exclusive agreement

**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



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7/19/2022

No	Name	Item	Description	CUSTOMER	Program	Category
43	DOWKEY MICROWAVE	401J-420832	SPDT, RF Switch	Not under eleven customer		Exclusive agreement
44	DOWKEY MICROWAVE	401J-480832	RF Switch	Not under eleven customer		Exclusive agreement
45	DOWKEY MICROWAVE	401K-220832A	RF-Switch	Not under eleven customer		Exclusive agreement
46	DOWKEY MICROWAVE	401KT-220802A	RF Switch	Not under eleven customer		Exclusive agreement
47	DOWKEY MICROWAVE	401T-220832	RF-Switch	Not under eleven customer		Exclusive agreement
48	DOWKEY MICROWAVE	401T-220832A	RF Switch	Not under eleven customer		Exclusive agreement
49	DOWKEY MICROWAVE	401T-220832A-ROHS	RF Switch	Not under eleven customer		Exclusive agreement
50	DOWKEY MICROWAVE	401T-230832A	RF Switch	Not under eleven customer		Exclusive agreement
51	DOWKEY MICROWAVE	401T-290832A	RF-Switch	Not under eleven customer		Exclusive agreement
52	DOWKEY MICROWAVE	401T-6208	RF-Switch	Not under eleven customer		Exclusive agreement
53	DOWKEY MICROWAVE	401T-620832	RF-Switch	Not under eleven customer		Exclusive agreement
54	DOWKEY MICROWAVE	401T-630832	RF-Switch	Not under eleven customer		Exclusive agreement
55	DOWKEY MICROWAVE	401T-7208	SW, MS-PL-12-SMA-TP-	Not under eleven customer		Exclusive agreement
56	DOWKEY MICROWAVE	401U-220832L-1	RF-Switch	Not under eleven customer		Exclusive agreement
57	DOWKEY MICROWAVE	401Y-2211	DC~40GHz, SPDT Switc	Not under eleven customer		Exclusive agreement
58	DOWKEY MICROWAVE	401Y-2211-ROHS	RF-Switch	Not under eleven customer		Exclusive agreement
59	DOWKEY MICROWAVE	402-230132	RF Switch	Not under eleven customer		Exclusive agreement
60	DOWKEY MICROWAVE	402-320132	RF Switch	Not under eleven customer		Exclusive agreement
61	DOWKEY MICROWAVE	402-4201	RF SWITCH, LATCHING	Not under eleven customer		Exclusive agreement
62	DOWKEY MICROWAVE	402A-3301	RF Switch	Not under eleven customer		Exclusive agreement
63	DOWKEY MICROWAVE	402A-420132A	SWITCH	Not under eleven customer		Exclusive agreement
64	DOWKEY MICROWAVE	402A-420132A-ROHS	RF Switch	Not under eleven customer		Exclusive agreement
65	DOWKEY MICROWAVE	402A-430132A	SPDT Switch	Not under eleven customer		Exclusive agreement
66	DOWKEY MICROWAVE	402J-280132A	RF Switch	Not under eleven customer		Exclusive agreement
67	DOWKEY MICROWAVE	402J-330132	RF Switch	Not under eleven customer		Exclusive agreement
68	DOWKEY MICROWAVE	402J-430132	RF-Switch	Not under eleven customer		Exclusive agreement
69	DOWKEY MICROWAVE	402J-480132	RF-Switch	Not under eleven customer		Exclusive agreement
70	DOWKEY MICROWAVE	403-2208	RF Switch	Not under eleven customer		Exclusive agreement
71	DOWKEY MICROWAVE	403-220802A	RELAY-POWER	Not under eleven customer		Exclusive agreement
72	DOWKEY MICROWAVE	403-2908	RF Switch	Not under eleven customer		Exclusive agreement
73	DOWKEY MICROWAVE	403A-220802A	RF Switch	Not under eleven customer		Exclusive agreement
74	DOWKEY MICROWAVE	403Y-2211	RF Switch	Not under eleven customer		Exclusive agreement
75	DOWKEY MICROWAVE	411-420802A	RELAY-POWER	Not under eleven customer		Exclusive agreement
76	DOWKEY MICROWAVE	411C-230802A	RF-Switch	Not under eleven customer		Exclusive agreement
77	DOWKEY MICROWAVE	411C-230802A-ROHS	RF Switch	Not under eleven customer		Exclusive agreement
78	DOWKEY MICROWAVE	411C-230832A	RF SWITCH 28VDC	Not under eleven customer		Exclusive agreement
79	DOWKEY MICROWAVE	411C-290802A	SWITCH, RF DPDT/TRAN	Not under eleven customer		Exclusive agreement
80	DOWKEY MICROWAVE	411C-3308	RF Switch	Not under eleven customer		Exclusive agreement
81	DOWKEY MICROWAVE	411C-3808	RF Switch	Not under eleven customer		Exclusive agreement
82	DOWKEY MICROWAVE	411C-420832A	RELAY-POWER	Not under eleven customer		Exclusive agreement
83	DOWKEY MICROWAVE	411C-420832A-ROHS	RF-Switch	Not under eleven customer		Exclusive agreement
84	DOWKEY MICROWAVE	411C-480832	RF Switch	Not under eleven customer		Exclusive agreement
85	DOWKEY MICROWAVE	411C-630832	RF-Switch	Not under eleven customer		Exclusive agreement
86	DOWKEY MICROWAVE	411CJ-380832	RF Switch	Not under eleven customer		Exclusive agreement



Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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7/19/2022

No	Name	Item	Description	CUSTOMER	Program	Category
87	DOWKEY MICROWAVE	411CJT-230832-ROHS	RF-Switch	Not under eleven customer		Exclusive agreement
88	DOWKEY MICROWAVE	411CJW-4308	RF-Switch	Not under eleven customer		Exclusive agreement
89	DOWKEY MICROWAVE	411CT-220832A	RF-Switch	Not under eleven customer		Exclusive agreement
90	DOWKEY MICROWAVE	412-153	RF-Switch	Not under eleven customer		Exclusive agreement
91	DOWKEY MICROWAVE	412-2301	RF-Switch	Not under eleven customer		Exclusive agreement
92	DOWKEY MICROWAVE	412-230132	RF Switch	Not under eleven customer		Exclusive agreement
93	DOWKEY MICROWAVE	412-2301-ROHS	RF-Switch	Not under eleven customer		Exclusive agreement
94	DOWKEY MICROWAVE	412-380132	RF Switch	Not under eleven customer		Exclusive agreement
95	DOWKEY MICROWAVE	412-420132	RF-Switch	Not under eleven customer		Exclusive agreement
96	DOWKEY MICROWAVE	412-430132	RF Switch	Not under eleven customer		Exclusive agreement
97	DOWKEY MICROWAVE	412-480132	SW, LTS-L-24-N-I	Not under eleven customer		Exclusive agreement
98	DOWKEY MICROWAVE	431-520803	RF Switch	Not under eleven customer		Exclusive agreement
99	DOWKEY MICROWAVE	431J-420803A	SW,3MPT-L-12-SMA-TTL	Not under eleven customer		Exclusive agreement
100	DOWKEY MICROWAVE	431J-420803A-ROHS	RF Switch	Not under eleven customer		Exclusive agreement
101	DOWKEY MICROWAVE	431L-420823A	RF-Switch	Not under eleven customer		Exclusive agreement
102	DOWKEY MICROWAVE	431LT-4208	SW, NEW	Not under eleven customer		Exclusive agreement
103	DOWKEY MICROWAVE	433-430802E	SWITCH	Not under eleven customer		Exclusive agreement
104	DOWKEY MICROWAVE	441-480822	RF-Switch	Not under eleven customer		Exclusive agreement
105	DOWKEY MICROWAVE	441-490803A	RF SWITCH/RELAY 4-Po	Not under eleven customer		Exclusive agreement
106	DOWKEY MICROWAVE	441J-420803A	SW,4MPT-L-12-SMA-TTL	Not under eleven customer		Exclusive agreement
107	DOWKEY MICROWAVE	441L-420822A	RF-Switch	Not under eleven customer		Exclusive agreement
108	DOWKEY MICROWAVE	441L-420823A-ROHS	RF-Switch	Not under eleven customer		Exclusive agreement
109	DOWKEY MICROWAVE	461C-420822	RF-Switch	Not under eleven customer		Exclusive agreement
110	DOWKEY MICROWAVE	461J-420803A	SW,6MPT-L-12-SMA-TTL	Not under eleven customer		Exclusive agreement
111	DOWKEY MICROWAVE	461J-420803A-ROHS	RF Switch	Not under eleven customer		Exclusive agreement
112	DOWKEY MICROWAVE	521-220832L	RF Switch	Not under eleven customer		Exclusive agreement
113	DOWKEY MICROWAVE	521-220833L	RF Switch	Not under eleven customer		Exclusive agreement
114	DOWKEY MICROWAVE	521-220833L-1	RF Switch	Not under eleven customer		Exclusive agreement
115	DOWKEY MICROWAVE	521-290803A	RF-Switch	Not under eleven customer		Exclusive agreement
116	DOWKEY MICROWAVE	521-420833A	RF Switch	Not under eleven customer		Exclusive agreement
117	DOWKEY MICROWAVE	521-430833A	SWITCH	Not under eleven customer		Exclusive agreement
118	DOWKEY MICROWAVE	521-480833A	RF-Switch	Not under eleven customer		Exclusive agreement
119	DOWKEY MICROWAVE	521J-420803A	SW, MST-L-12-SMA-TTL	Not under eleven customer		Exclusive agreement
120	DOWKEY MICROWAVE	521JU-280833A	RF-Switch	Not under eleven customer		Exclusive agreement
121	DOWKEY MICROWAVE	521JU-420803A	RF-Switch	Not under eleven customer		Exclusive agreement
122	DOWKEY MICROWAVE	521U-220833L-1	RF-Switch	Not under eleven customer		Exclusive agreement
123	DOWKEY MICROWAVE	521U-420833A-ROHS	RF-Switch	Not under eleven customer		Exclusive agreement
124	DOWKEY MICROWAVE	521Y-221103A	RF-Switch	Not under eleven customer		Exclusive agreement
125	DOWKEY MICROWAVE	521Y-421133A	RF-Switch	Not under eleven customer		Exclusive agreement
126	DOWKEY MICROWAVE	531A-430122A	RF Switch	Not under eleven customer		Exclusive agreement
127	DOWKEY MICROWAVE	531A-480122A	RF-Switch	Not under eleven customer		Exclusive agreement
128	DOWKEY MICROWAVE	535-5208	RF Switch	Not under eleven customer		Exclusive agreement
129	DOWKEY MICROWAVE	535-5308	RF Switch	Not under eleven customer		Exclusive agreement
130	DOWKEY MICROWAVE	535-530802A	RF-Switch	Not under eleven customer		Exclusive agreement

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No	Name	Item	Description	CUSTOMER	Program	Category
131	DOWKEY MICROWAVE	535-530822	RF-Switch	Not under eleven customer		Exclusive agreement
132	DOWKEY MICROWAVE	535-590802E	SWITCH, RF SP3T, OPE	Not under eleven customer		Exclusive agreement
133	DOWKEY MICROWAVE	535C-520822A	RF-Switch	Not under eleven customer		Exclusive agreement
134	DOWKEY MICROWAVE	535I-590802A	SW, 3MPO-NO-15-SMA-T	Not under eleven customer		Exclusive agreement
135	DOWKEY MICROWAVE	535K-5308	RF-Switch	Not under eleven customer		Exclusive agreement
136	DOWKEY MICROWAVE	535T-520822A	RF-Switch	Not under eleven customer		Exclusive agreement
137	DOWKEY MICROWAVE	535T-520822A-ROHS	RF-Switch	Not under eleven customer		Exclusive agreement
138	DOWKEY MICROWAVE	535T-530822A	SWITCH	Not under eleven customer		Exclusive agreement
139	DOWKEY MICROWAVE	541-490803A	Coaxial Switches	Not under eleven customer		Exclusive agreement
140	DOWKEY MICROWAVE	541-530803	SWITCH,RF	Not under eleven customer		Exclusive agreement
141	DOWKEY MICROWAVE	541A-480T	RF-Switch	Not under eleven customer		Exclusive agreement
142	DOWKEY MICROWAVE	545-520802A	RF-Switch	Not under eleven customer		Exclusive agreement
143	DOWKEY MICROWAVE	545-5308	RF-Switch	Not under eleven customer		Exclusive agreement
144	DOWKEY MICROWAVE	545-530802A	RF-Switch	Not under eleven customer		Exclusive agreement
145	DOWKEY MICROWAVE	545-530822	RF-Switch	Not under eleven customer		Exclusive agreement
146	DOWKEY MICROWAVE	545-530822A	RF-Switch	Not under eleven customer		Exclusive agreement
147	DOWKEY MICROWAVE	545C-520822A	RF-Switch	Not under eleven customer		Exclusive agreement
148	DOWKEY MICROWAVE	545D-530802	RF-Switch	Not under eleven customer		Exclusive agreement
149	DOWKEY MICROWAVE	545J-520802A	RF-Switch	Not under eleven customer		Exclusive agreement
150	DOWKEY MICROWAVE	545J-5308	RF-Switch, SP4T	Not under eleven customer		Exclusive agreement
151	DOWKEY MICROWAVE	545J-530802A-ROHS	RF-Switch	Not under eleven customer		Exclusive agreement
152	DOWKEY MICROWAVE	545J-5308-ROHS	RF-Switch	Not under eleven customer		Exclusive agreement
153	DOWKEY MICROWAVE	545ST-590802A	RF-Switch	Not under eleven customer		Exclusive agreement
154	DOWKEY MICROWAVE	545T-590802A-ROHS	RF-Switch	Not under eleven customer		Exclusive agreement
155	DOWKEY MICROWAVE	561ACJ-480T22	RF-Switch	Not under eleven customer		Exclusive agreement
156	DOWKEY MICROWAVE	561Y-421123A	RF-Switch	Not under eleven customer		Exclusive agreement
157	DOWKEY MICROWAVE	561Y-421123A-ROHS	RF-Switch	Not under eleven customer		Exclusive agreement
158	DOWKEY MICROWAVE	565-520802A	RF-Switch	Not under eleven customer		Exclusive agreement
159	DOWKEY MICROWAVE	565-5308	RF-Switch	Not under eleven customer		Exclusive agreement
160	DOWKEY MICROWAVE	565-530802A	RF-Switch	Not under eleven customer		Exclusive agreement
161	DOWKEY MICROWAVE	565-530822A	RF-Switch	Not under eleven customer		Exclusive agreement
162	DOWKEY MICROWAVE	565-9208	RF-Switch	Not under eleven customer		Exclusive agreement
163	DOWKEY MICROWAVE	565J-520802A	RF-Switch	Not under eleven customer		Exclusive agreement
164	DOWKEY MICROWAVE	565J-580802A	RF-Switch	Not under eleven customer		Exclusive agreement
165	DOWKEY MICROWAVE	571ST-590802A	RF-Switch	Not under eleven customer		Exclusive agreement
166	DOWKEY MICROWAVE	581-420822	SP8T, RF Switch	Not under eleven customer		Exclusive agreement
167	DOWKEY MICROWAVE	581-5308	RF-Switch	Not under eleven customer		Exclusive agreement
168	DOWKEY MICROWAVE	581-590803E	SWITCH, RF SP8T, OPE	Not under eleven customer		Exclusive agreement
169	DOWKEY MICROWAVE	581C-520822A	RF-Switch	Not under eleven customer		Exclusive agreement
170	DOWKEY MICROWAVE	581I-420803A	SW,BMPT-L-12-SMA-TTL	Not under eleven customer		Exclusive agreement
171	DOWKEY MICROWAVE	581ST-530802A	RF-Switch	Not under eleven customer		Exclusive agreement
172	DOWKEY MICROWAVE	5CT-490803A	RF-Switch	Not under eleven customer		Exclusive agreement
173	DOWKEY MICROWAVE	919C70100	SW, SPDT-F-28-SMA	Not under eleven customer		Exclusive agreement
174	DOWKEY MICROWAVE	919C70200	RF-Switch	Not under eleven customer		Exclusive agreement

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No	Name	Item	Description	CUSTOMER	Program	Category
175	DOWKEY MICROWAVE	CANCELLATION FEE	521U-220802A Cancell	Not under eleven customer		Exclusive agreement
176	DOWKEY MICROWAVE	CB-3U185-10X10-ENET	10X10 CROSSBAR RF MA	Not under eleven customer		Exclusive agreement
177	DOWKEY MICROWAVE	EXPEDITE	EXPEDITE CHARGE	Not under eleven customer		Exclusive agreement
178	DOWKEY MICROWAVE	MP-2U185-18T-GPIB	RF MATRIX	Not under eleven customer		Exclusive agreement
179	DOWKEY MICROWAVE	MP-4U185-40-ENET	Matrix	Not under eleven customer		Exclusive agreement
180	DOWKEY MICROWAVE	R403-220802A	RELAY-POWER	Not under eleven customer		Exclusive agreement
181	DOWKEY MICROWAVE	REPAIR,545J-5308	545J-5308, REPAIR	Not under eleven customer		Exclusive agreement
182	Data Device Corporation	28LV010RPF1-20	IC	HANWHA	HSC R&D	Exclusive agreement
183	Data Device Corporation	28LV010RPF1-20	IC	KAI	SAT7	Exclusive agreement
184	Data Device Corporation	BU-61559D1-110	PERIPHERAL MICROPROC	HANWHA	HSC MASS	Exclusive agreement
185	Data Device Corporation	BU-61580G6-390	IC	HANWHA	HSC R&D	Exclusive agreement
186	Data Device Corporation	BU-61581S1-100	IC	HANWHA	HFLR	Exclusive agreement
187	Data Device Corporation	BU-61581S1-110	IC	HANWHA	K9	Exclusive agreement
188	Data Device Corporation	BU-61743G3-290	IC-BUS CONTROLLER,-	HANWHA	LTS	Exclusive agreement
189	Data Device Corporation	BU-61860B3-202	IC	HANWHA	SMFO	Exclusive agreement
190	Data Device Corporation	BU-62864G3-290	IC-BUS CONTROLLER	HANWHA	K21	Exclusive agreement
191	Data Device Corporation	BU-63705F2-120	IC-BUS CONTROLLER	HANWHA	HSC R&D	Exclusive agreement
192	Data Device Corporation	BU-63705F2-300	IC-BUS CONTROLLER	HANWHA	SAT7A	Exclusive agreement
193	Data Device Corporation	BU-63705F3-120	IC-BUS CONTROLLER	HANWHA	SAT7	Exclusive agreement
194	Data Device Corporation	BU-63705F3-300	IC-BUS CONTROLLER	HANWHA	SATELLITE	Exclusive agreement
195	Data Device Corporation	BU-63825G6-290	IC	HANWHA	SATELLITE	Exclusive agreement
196	Data Device Corporation	BU-64743G8-290	1553 CONTROLLER	HANWHA	KUH	Exclusive agreement
197	Data Device Corporation	BU-64743G8-290	IC-BUS CONTROLLER	HANWHA	LTS	Exclusive agreement
198	Data Device Corporation	BU-64843T8-E02	IC	BR	LAH	Exclusive agreement
199	Data Device Corporation	BU-65863H8-E02	IC	HANWHA	LAH	Exclusive agreement
200	Data Device Corporation	BU-67102U100L-CA0	IC	HANWHA	LWR	Exclusive agreement
201	Data Device Corporation	BU-67103U200L-JL0	IC,USB, 2CH 1553B &	HANWHA	KJIP	Exclusive agreement
202	Data Device Corporation	DRC-644-L-1R	IC,DRC	HANWHA	BIHO	Exclusive agreement
203	Data Device Corporation	DSC-11524-204	IC	HANWHA	SPIDER	Exclusive agreement
204	Data Device Corporation	DSC-11524-204Z	IC	HANWHA	K1E1	Exclusive agreement
205	Data Device Corporation	DSC-11524-304	IC	HANWHA	KGPS	Exclusive agreement
206	Data Device Corporation	NH1-15691RTGW/M	CONTROLLER	KAI	KUH	Exclusive agreement
207	Data Device Corporation	OSC-15801-110	IC	KAI	FDR	Exclusive agreement
208	Data Device Corporation	OSC-15801-200	IC	HANWHA	LTS	Exclusive agreement
209	Data Device Corporation	RD-19231FX-205	IC	HANWHA	UAV	Exclusive agreement
210	Data Device Corporation	RP-21209D0-100	IC	HANWHA	EOTS	Exclusive agreement
211	Data Device Corporation	RP-21225D0-100	IC,POWER CONTROLLER	HANWHA	KGPS	Exclusive agreement
212	Data Device Corporation	SD-14592D2-104	IC	HANWHA	PEGASUS	Exclusive agreement
213	Data Device Corporation	SD14621DS-205	IC-A/D CONVERTER	HANWHA	TARGETING FOR WHEELED	Exclusive agreement
214	Data Device Corporation	SD-14621DS-205	ICRDC	HANWHA	K2	Exclusive agreement
215	Data Device Corporation	SD-14623DX-104	IC-CONTROLLER	HANWHA	TTC-95K	Exclusive agreement
216	Data Device Corporation	SDC14566-105	IC	HANWHA	UH-60	Exclusive agreement
217	Data Device Corporation	SDC-14566-105	IC	HANWHA	KT GPS	Exclusive agreement
218	Data Device Corporation	SDC-14567-125	IC	HANWHA	BIHO SP	Exclusive agreement

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No	Name	Item	Description	CUSTOMER	Program	Category
219	Data Device Corporation	SDC-14615T-104	IC	HANWHA	HFLIR	Exclusive agreement
220	Data Device Corporation	XD-14591D5-302	SYNCHRO TO DIGITAL C	HANWHA	WSA-423	Exclusive agreement
221	Beta Transformer	13218	TRANS PULSE	HANWHA	LAH TADS	Exclusive agreement
222	Beta Transformer	13290	TRANS PULSE	HANWHA	PKX	Exclusive agreement
223	Beta Transformer	21049	TRANSFORMER	HANWHA	PKX	Exclusive agreement
224	Beta Transformer	32976	TRANSFORMER	HANWHA	PKX	Exclusive agreement
225	Beta Transformer	33920	TRANSFORMER	HANWHA	PKX	Exclusive agreement
226	Beta Transformer	40737	IC	HANWHA	K1A2	Exclusive agreement
227	Beta Transformer	21049C	TRANSFORMER-2	HANWHA	HSC	Exclusive agreement
228	Beta Transformer	264A608-1	COUPLER	KAI	BOEING A-10	Exclusive agreement
229	Beta Transformer	264A609-1	COUPLER	KAI	BOEING A-10	Exclusive agreement
230	Beta Transformer	571-18-8002	DATA BUS	HANWHA	K2	Exclusive agreement
231	Beta Transformer	8-1126	TRANSFORMER PULSE	HANWHA	HSC	Exclusive agreement
232	Beta Transformer	8-2204	TRANS PULSE	HANWHA	HSC	Exclusive agreement
233	Beta Transformer	BUS-25679	TRANSFORMER	HANWHA	HFLIR	Exclusive agreement
234	Beta Transformer	BXX-2	BOARD-SERIAL INTERFA	HANWHA	HSC R&D	Exclusive agreement
235	Beta Transformer	DB12005	DATA BUS COUPLER	KAI	KFX	Exclusive agreement
236	Beta Transformer	DB20010	BUS COUPLER	KAI	SAR	Exclusive agreement
237	Beta Transformer	DB30010	BRKT-TUBE	DSK	KFX	Exclusive agreement
238	Beta Transformer	DB40010	1553 COUPLER - 4 STU	KAI	SAR	Exclusive agreement
239	Beta Transformer	HLP-6020-HREL-5	TRANSFORMER	KARI	KARI	Exclusive agreement
240	Beta Transformer	MLP-2216	TRANSFORMER	KARI	KARI	Exclusive agreement
241	Beta Transformer	MLP-2216-HREL	TRANSFORMER	KARI	KARI	Exclusive agreement
242	Beta Transformer	NH17109-1	COUPLER	KAI	KFX	Exclusive agreement
243	Beta Transformer	NH17109-2	COUPLER	KAI	KFX	Exclusive agreement
244	Beta Transformer	NH17109-3	COUPLER	KAI	KFX	Exclusive agreement
245	Beta Transformer	NH17109-5	COUPLER	KAI	KFX	Exclusive agreement
246	Beta Transformer	NH17109-6	COUPLER	KAI	KFX	Exclusive agreement
247	Beta Transformer	NH17147-1-100	COUPLER ASSY	KAI	KFX	Exclusive agreement
248	Beta Transformer	NH17147-1-130	COUPLER	KAI	KFX	Exclusive agreement
249	Beta Transformer	NH17147-1-170-90	COUPLER ASSY	KAI	KFX	Exclusive agreement
250	Beta Transformer	NH17147-2-105	COUPLER ASSY	KAI	KFX	Exclusive agreement
251	Beta Transformer	NH17147-2-215-90	COUPLER ASSY	KAI	KFX	Exclusive agreement
252	Beta Transformer	NH17147-3-105	COUPLER ASSY	KAI	KFX	Exclusive agreement
253	Beta Transformer	NH17147-3-130	COUPLER	KAI	KFX	Exclusive agreement
254	Beta Transformer	NH17147-4-090	COUPLER ASSY	KAI	KFX	Exclusive agreement
255	Beta Transformer	NH17147-4-105	COUPLER ASSY	KAI	KFX	Exclusive agreement
256	Beta Transformer	NH17147-4-130	COUPLER	KAI	KFX	Exclusive agreement
257	Beta Transformer	NH17147-4-150-90	COUPLER ASSY	KAI	KFX	Exclusive agreement
258	Beta Transformer	NH17147-4-155	COUPLER ASSY	KAI	KFX	Exclusive agreement
259	Beta Transformer	NH17147-5-105	COUPLER	KAI	KFX	Exclusive agreement
260	Beta Transformer	NH17147-6-200-45	COUPLER ASSY	KAI	KFX	Exclusive agreement
261	Beta Transformer	NH17183	DIODE	KAI	KAI R&D	Exclusive agreement
262	Beta Transformer	NH17184	DIODE	KAI	KAI R&D	Exclusive agreement



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No	Name	Item	Description	CUSTOMER	Program	Category
263	Beta Transformer	RT500078	MUX TERMINATOR	KAI	SKY-Q46	Exclusive agreement
264	Beta Transformer	T1A210468	TRANSFORMER	HANWHA	BIHO	Exclusive agreement
265	Beta Transformer	T1B210468	TRANSFORMER-3	HANWHA	HSC MASS	Exclusive agreement
266	Beta Transformer	TLP-1205	TRANSFORMER	HANWHA	KSAM	Exclusive agreement
267	Beta Transformer	TST-9002	TRANS PULSE	HANWHA	K1A1	Exclusive agreement
268	Beta Transformer	TST-9007	TRANS PULSE-TRANSFOR	HANWHA	K1A1	Exclusive agreement
269	Beta Transformer	TST-9017	TRANS PULSE:TST9017-	HANWHA	K1A1	Exclusive agreement
270	LASER BASED MEASUREMENT	DK9CHROME240	Bore Erosion Measurement Inspection Sys	Not under eleven customer		Exclusive agreement
271	MESL MICROWAVE	10C 10416	S-BAND HALF HEIGHT W	HANWHA	S-BAND	Exclusive agreement
272	MESL MICROWAVE	10U 10413	S-BAND HALF HEIGHT W	HANWHA	S-BAND	Exclusive agreement
273	MESL MICROWAVE	11122-000-OL_iss F	CIRCULATOR	HANWHA	KFX	Exclusive agreement
274	MESL MICROWAVE	11206-000-OL_iss 2	CIRCULATOR	HANWHA	KFX	Exclusive agreement
275	MESL MICROWAVE	18K9671	MODULE-FERRITE SWITC	HANWHA	KSAM	Exclusive agreement
276	MESL MICROWAVE	20K10135	WAVEGUIDE S/W	HANWHA	APS	Exclusive agreement
277	MESL MICROWAVE	22C11005	FREQ-CIRCULATOR	HANWHA	MMIC	Exclusive agreement
278	MESL MICROWAVE	22C11103	WR28 ISOLTOR	HANWHA	KA-BAND	Exclusive agreement
279	MESL MICROWAVE	22C11309	FREQ-ISOLATOR	HANWHA	KA-BAND	Exclusive agreement
280	MESL MICROWAVE	KD10427	26.5-40 GHZ COAXIAL	EMWAVE		Exclusive agreement
281	MESL MICROWAVE	NRE	NON RECURRING ENGINN			Exclusive agreement
282	MESL MICROWAVE	XPM11206	CIRCULATOR	HANWHA	KDDX	Exclusive agreement
283	VPT	5962R1221901HXC	IC, DCDC CONVERTOR ,	KAI	SAT7	Exclusive agreement
284	VPT	DV200-2815D	DC-DC CONVERTER	HANWHA	PKG-B #5-8	Exclusive agreement
285	VPT	DVHF2805DF	DC-DC CONVERTER	HANWHA	HFLIR	Exclusive agreement
286	VPT	DVHF2805S	CONVERTER-DC/DC	HANWHA	PKG EOTS	Exclusive agreement
287	VPT	DVHF2812S	CONVERTER-DC/DC	HANWHA	K2	Exclusive agreement
288	VPT	DVHF283R3S	CONVERTER-DC/DC	HANWHA	TAS-815K	Exclusive agreement
289	VPT	DVHF285R2S	Converter	HANWHA	TAS-815K	Exclusive agreement
290	VPT	DVMA28	FILTER	HANWHA	PKG EOTS	Exclusive agreement
291	VPT	DVME28	EMI FILTER	HANWHA	HFLIR REPAIR	Exclusive agreement
292	VPT	DVMN28	CONVERTER-DC/DC	HANWHA	K21 BCS	Exclusive agreement
293	VPT	DVSA2805S	Converter	HANWHA	TAS-815K	Exclusive agreement
294	VPT	DVSA2812S	Converter	HANWHA	AMSCP	Exclusive agreement
295	VPT	DVSA2815D	CONVERTER-DC/DC	HANWHA	FFX-III	Exclusive agreement
296	VPT	DVSB2853R3D	DC-DC CONVERTER	HANWHA	FFX-III EOTS	Exclusive agreement
297	VPT	DVTR283R3S	CONVERTER-DC/DC	HANWHA	FFX-III EOTS	Exclusive agreement
298	VPT	DVTR28512T	DC/DC CONVERTER	HANWHA	TARGETING FOR WHEELED	Exclusive agreement
299	VPT	SVGA0510S/EM	IC,DCDC CONVERTOR ,S	KAI		Exclusive agreement
300	VPT	SVGA0510S/H+	IC, DCDC CONVERTOR ,	KAI		Exclusive agreement
301	VPT	TP-013	PAD,THERMAL,VXR15	KAI		Exclusive agreement
302	VPT	VPTF10-28	FILTER	HANWHA	TAS-815K	Exclusive agreement
303	VPT	VXR30-283R3S	ELECTRONIC MODULE,ST	KAI		Exclusive agreement
304	KNT ENGINEERING	ANV-126-700	IMAGE TUBE TEST ADAP	HANWHA	ANVIS	Exclusive agreement
305	KNT ENGINEERING	ANV-126A	NIGHT VISION DEVICE	HANWHA	ANVIS	Exclusive agreement
306	KNT ENGINEERING	ANV-126A-001	NIGHT VISION DEVICE	HANWHA	ANVIS	Exclusive agreement



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No	Name	Item	Description	CUSTOMER	Program	Category
307	KNT ENGINEERING	FFNVG	FLASHLIGHT FILTER #1	HANWHA	NIGHT VISION	Exclusive agreement
308	KNT ENGINEERING	NGRS-15401	SHUTTERED EYEGUARD	HANWHA	NGRS	Exclusive agreement
309	KNT ENGINEERING	NGRS-21100	SHUTTERED EYEGUARD	HANWHA	NGRS	Exclusive agreement
310	KNT ENGINEERING	NV-4AM	FLASHLIGHT FILTER #2	HANWHA	NV	Exclusive agreement
311	KNT ENGINEERING	NVG-102B	INSPECTION SCOPE	HANWHA	NVG	Exclusive agreement
312	APERTURE OPTICAL SCIENCE	8U554411	PRIMARY MIRROR	HANWHA	MUAV	Exclusive agreement
313	APERTURE OPTICAL SCIENCE	8U554421	SECONDARY MIRROR	HANWHA	MUAV	Exclusive agreement
314	APERTURE OPTICAL SCIENCE	LSIC22012	M2	HANWHA	LSIC	Exclusive agreement
315	APERTURE OPTICAL SCIENCE	LSIC24001	M3	HANWHA	LSIC	Exclusive agreement
316	APERTURE OPTICAL SCIENCE	LSIC23001	M4	HANWHA	LSIC	Exclusive agreement
317	BRANDYWINE	77-HSIS21401	GRATING_VNIR	HANWHA	GRATING	Exclusive agreement
318	BRANDYWINE	77-HSIS21402	GRATING_VNIR DUMMY	HANWHA	GRATING	Exclusive agreement
319	BRANDYWINE	77-HSIS21701	GRATING_SWIR	HANWHA	GRATING	Exclusive agreement
320	BRANDYWINE	77-HSIS21702	GRATING_SWIR DUMMY	HANWHA	GRATING	Exclusive agreement
321	BRANDYWINE	VNIR_ENGINEERING	ENGINEERING GRADE	HANWHA	GRATING	Exclusive agreement
322	BRANDYWINE	VNIR_WITNESS	WITNESS SAMPLE	HANWHA	GRATING	Exclusive agreement
323	DIAMOND MICROWAVE	10-2621-0	6-CH R/J REV. B, WR-	FMWAVE	COSTAL	Exclusive agreement
324	DIAMOND MICROWAVE	10-2621-0_WAR	ONE YEAR EXTENDED WA	EMWAVE	COSTAL	Exclusive agreement
325	DIAMOND MICROWAVE	116-2255-0	DUAL CHANNEL COAXIAL	EMWAVE	2CH	Exclusive agreement
326	DIAMOND MICROWAVE	116-2255-0_AT	ACCEPTANCE TEST LOT	EMWAVE	2CH	Exclusive agreement
327	DIAMOND MICROWAVE	116-2255-0_EIDP	END ITEM DATA PACKAG	EMWAVE	2CH	Exclusive agreement
328	DIAMOND MICROWAVE	116-2255-0_EV	116-2255-0 Evaluatio	EMWAVE	2CH	Exclusive agreement
329	DIAMOND MICROWAVE	116-2255-0_PM	Program Management	EMWAVE	2CH	Exclusive agreement
330	DIAMOND MICROWAVE	116-2255-0_TPR	TEST PROCEDURE REVIS	EMWAVE	2CH	Exclusive agreement
331	DIAMOND MICROWAVE	18-2124-0	ROTARY JOINT	EMWAVE	2CH	Exclusive agreement
332	DIAMOND MICROWAVE	40-746-0	(WR112) ROTARY JOINT	MMSYS		Exclusive agreement
333	DIAMOND MICROWAVE	Q34501	SPACE LEVEL ROTARY J	EMWAVE		Exclusive agreement
334	DIAMOND MICROWAVE	Q34501_AT	Assembly Traveler	EMWAVE		Exclusive agreement
335	DIAMOND MICROWAVE	Q34501_CST	CST Thermal RF Analy	EMWAVE		Exclusive agreement
336	DIAMOND MICROWAVE	Q34501_EIDP	END ITEM DATA PACKAG	EMWAVE		Exclusive agreement
337	DIAMOND MICROWAVE	Q34501_MPL	Materials & Process	EMWAVE		Exclusive agreement
338	DIAMOND MICROWAVE	Q34501_MPR	Monthly Progress Rep	EMWAVE		Exclusive agreement
339	DIAMOND MICROWAVE	Q34501_NRE	Q34501 Non-Recurring	EMWAVE		Exclusive agreement
340	DIAMOND MICROWAVE	Q34501_PM	Program Management	EMWAVE		Exclusive agreement
341	DIAMOND MICROWAVE	Q34501_SOW	SOW Complicane Matri	EMWAVE		Exclusive agreement
342	DIAMOND MICROWAVE	Q34501_SV	Sine Vibration	EMWAVE		Exclusive agreement
343	DIAMOND MICROWAVE	Q34501_TF	Test Fixtures	EMWAVE		Exclusive agreement
344	DIAMOND MICROWAVE	Q34501_TP	Test Procedures	EMWAVE		Exclusive agreement
345	DIAMOND MICROWAVE	Q34501_TT	Thermal RF & Torque	EMWAVE		Exclusive agreement
346	DIAMOND MICROWAVE	Q34501_VTP	Verification Test PI	EMWAVE		Exclusive agreement
347	DIAMOND MICROWAVE	QTP	QUALIFICATION TEST P	EMWAVE		Exclusive agreement
348	INRAD OPTICS	2830224-1	MIRROR, HEAD, STEP 2	HANWHA	K1	Exclusive agreement
349	INRAD OPTICS	8U353072	40 X 40 X 40mm Beams	HANWHA	HSC R&D	Exclusive agreement
350	INRAD OPTICS	8U353072-1	40 X 40 X 38.75mm Be	CAPH		Exclusive agreement

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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No	Name	Item	Description	CUSTOMER	Program	Category
351	Polarity	IKASK1303	MPA	HANWHA	SEEKER	Exclusive agreement
352	NAECO	LSMF30110-TOP	Cold Plate	HANWHA	LSAM	Exclusive agreement
353	NAECO	LSMF30120-BOTTOM	Cold Plate	HANWHA	LSAM	Exclusive agreement
354	DSTI	LSMEA8000	ROTARY JOINT	HANWHA	LSAM	Exclusive agreement
355	DSTI	LSMF86100	ROTARY JOINT	HANWHA	LSAM	Exclusive agreement
356	STEADFAST	10511528	IC	KAI	SOF	Manufacturer authorization letter
357	STEADFAST	520200105	TRANSISTOR	KAI	SOF	Manufacturer authorization letter
358	STEADFAST	520301006	TRANSISTOR	KAI	SOF	Manufacturer authorization letter
359	STEADFAST	520700212	TRANSISTOR	KAI	SOF	Manufacturer authorization letter
360	STEADFAST	920302302	MICROCIRCUIT	KAI	SAQ	Manufacturer authorization letter
361	STEADFAST	2N5153RESYIRG	TRANS GP BJT PNP 80V	SATREC	COSMOS	Manufacturer authorization letter
362	STEADFAST	2N5153RESYHRT	TRANS GP BJT PNP 80V	SATREC	COSMOS	Manufacturer authorization letter
363	STEADFAST	2N5153SHRG	TR, PNP, HIGH SPEED	HANWHA	SATELLITE II	Manufacturer authorization letter
364	STEADFAST	2N5154SHRG	RAD-HARD 80 V, 5 A N	KAI	425	Manufacturer authorization letter
365	STEADFAST	520100205R	TRANSISTOR	KAI	SOF	Manufacturer authorization letter
366	STEADFAST	520101904R	TRN LNPN 160V 500MA	KAI	SAF	Manufacturer authorization letter
367	STEADFAST	520101908R	TR, NPN, GENERAL, 16	KAI	SAF	Manufacturer authorization letter
368	STEADFAST	520400204R	TR	KAI	SAF	Manufacturer authorization letter
369	STEADFAST	520400206(2N5153SHRG)	TR	KAI	SAF	Manufacturer authorization letter
370	STEADFAST	520700509R	TRANSISTOR	KAI	SOF	Manufacturer authorization letter
371	STEADFAST	5962F0252401VXA(RHFL4913KPA-02V)	IC	KAI	SAF	Manufacturer authorization letter
372	STEADFAST	5962F0252401VXC	IC	KAI	SOF	Manufacturer authorization letter
373	STEADFAST	5962F0252403VJC(RHFL4913SCA-07V)	IC	KAI	SAF	Manufacturer authorization letter
374	STEADFAST	5962F0253201VXA(RHFL7913KPA-02V)	IC	KAI	SAF	Manufacturer authorization letter
375	STEADFAST	5962F8755201VXA	IC	KAI	SOF	Manufacturer authorization letter
376	STEADFAST	5962F8761401VXA	IC	KAI	SOF	Manufacturer authorization letter
377	STEADFAST	5962F8761501VXA	IC	KAI	SOF	Manufacturer authorization letter
378	STEADFAST	5962F8762201VXA	IC	KAI	SOF	Manufacturer authorization letter
379	STEADFAST	5962F8762401VXA(RHFAC14K02V)	IC	KAI	SAF	Manufacturer authorization letter
380	STEADFAST	5962F8762401VXC	IC	KAI	SOF	Manufacturer authorization letter
381	STEADFAST	5962F8766303VXC	MICROCIRCUIT, OCTAL	KAI	GK3	Manufacturer authorization letter
382	STEADFAST	5962F8766303VXC(RHFAC1245K01V)	MICROCIRCUIT, OCTAL	KAI	SAF	Manufacturer authorization letter
383	STEADFAST	5962F8775802VXC (RHFAC245K01V)	K7 FM IC, OCTAL BUS	KAI	SAT7	Manufacturer authorization letter
384	STEADFAST	5962F8953901VXA	IC	KAI	SOF	Manufacturer authorization letter
385	STEADFAST	920110602F(M54HC08KT)	IC	KAI	SAF	Manufacturer authorization letter
386	STEADFAST	920111102F	MICROCIRCUIT, QUAD 2	KAI	CAS4	Manufacturer authorization letter
387	STEADFAST	920112002F	MICROCIRCUIT, QUAD 2	KAI	CAS4	Manufacturer authorization letter
388	STEADFAST	920112002F(M54HC132KT)	MICROCIRCUIT, QUAD 2	KAI	CAS4	Manufacturer authorization letter
389	STEADFAST	920204602(HCC40508KT)	IC	KAI	SAF	Manufacturer authorization letter
390	STEADFAST	920302301(HCC40138KG)	K7 FM IC, DUAL D-FU	KAI	SAT7	Manufacturer authorization letter
391	STEADFAST	920305002F	MICROCIRCUIT,DUAL D-	KAI	CAS4	Manufacturer authorization letter
392	STEADFAST	920305002F(M54HC74KT)	IC	KAI	SAF	Manufacturer authorization letter
393	STEADFAST	920501902F	IC	KAI	SOF	Manufacturer authorization letter
394	STEADFAST	920900502F	IC	KAI	SOF	Manufacturer authorization letter

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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No	Name	Item	Description	CUSTOMER	Program	Category
395	STEADFAST	930604102F	IC	KAI	SOF	Manufacturer authorization letter
396	STEADFAST	930604202F(M54HC165KT)	IC	KAI	SAF	Manufacturer authorization letter
397	STEADFAST	930605102F(M54HC595KT)	MICROCIRCUIT, 8BIT S	KAI	SAF	Manufacturer authorization letter
398	STEADFAST	940103802F	IC	KAI	SOF	Manufacturer authorization letter
399	STEADFAST	940103802F(M54HC4050KT)	IC	KAI	SAF	Manufacturer authorization letter
400	STEADFAST	940805201F(M54HC4066)	K7 FM IC, QUAD BILAT	KAI	SAT7	Manufacturer authorization letter
401	STEADFAST	940900702F	IC	KAI	SOF	Manufacturer authorization letter
402	STEADFAST	940900702F(M54HC14KT)	MICROCIRCUIT	KAI	SAF	Manufacturer authorization letter
403	STEADFAST	HCC4051BDG	SINGLE 8-CHANNEL ANA	SATREC		Manufacturer authorization letter
404	STEADFAST	HCC4051BK1	RAD-HARD SINGLE 8-CH	MMSYS		Manufacturer authorization letter
405	STEADFAST	JANSF2N3700UB	TR, NPN, GENERAL, 80	KAI	CAS4	Manufacturer authorization letter
406	STEADFAST	JANSR2N2222AUB	TR, NPN, GENERAL, 50	KAI	GEO	Manufacturer authorization letter
407	STEADFAST	M54HC4050K1	MICROCIRCUIT, HIGH-S	KAI	SAQ	Manufacturer authorization letter
408	STEADFAST	RH-AD128K1	Rad-Hard 8-channel 1	SATREC		Manufacturer authorization letter
409	STEADFAST	RHF1401KS01	RAD-HARD 14-BIT 20 M	IS		Manufacturer authorization letter
410	STEADFAST	RHF200K1	RAD-HARD FULLY DIFFE	MMSYS		Manufacturer authorization letter
411	STEADFAST	RHFAC08K01V	QUAD 2-INPUT AND GAT	IS		Manufacturer authorization letter
412	STEADFAST	RHFAC08K1	54AC Rad-Hard Quad 2	IS		Manufacturer authorization letter
413	STEADFAST	RHFAC1624K1	IC-DATA BUFFER	MMSYS		Manufacturer authorization letter
414	STEADFAST	RHFAC32K01V	QUAD 2-INPUT OR GATE	IS		Manufacturer authorization letter
415	STEADFAST	RHFAC32K1	54AC Rad-Hard Quad 2	IS		Manufacturer authorization letter
416	STEADFAST	RHFAC541K01V	FAST OCTAL LINE BUFF	IS		Manufacturer authorization letter
417	STEADFAST	RHFAC541K1	54AC Rad-Hard Octal	IS		Manufacturer authorization letter
418	STEADFAST	RHFAC138K01V	3 TO 8 DECODER	IS		Manufacturer authorization letter
419	STEADFAST	RHFAC138K1	RAD-HARD 3 TO 8 LINE	IS		Manufacturer authorization letter
420	STEADFAST	RHFAC244K01V	OCTAL BUFFERS AND LI	IS		Manufacturer authorization letter
421	STEADFAST	RHFAC244K1	RAD-HARD OCTAL BUS B	IS		Manufacturer authorization letter
422	STEADFAST	RHFL4913KPA-02V	IC	SATREC		Manufacturer authorization letter
423	STEADFAST	RHFL7913KPA-02V	RAD-HARD ADJUSTABLE	SATREC		Manufacturer authorization letter
424	STEADFAST	RHFL7913SCA1	NEGATIVE LDO	IS		Manufacturer authorization letter
425	STEADFAST	RHFLVDS2281K01V	Dual 4x4 LVDS Crossp	IS		Manufacturer authorization letter
426	STEADFAST	RHFLVDS2281K1	IC	IS		Manufacturer authorization letter
427	STEADFAST	RHFLVDS31AK01V	QUAD LVDS TX	HAHWA	SAT7	Manufacturer authorization letter
428	STEADFAST	RHFLVDS31AK1	IC-LINE DRIVER	HAHWA	MICRO SAR	Manufacturer authorization letter
429	STEADFAST	RHFLVDS32AK01V	QUAD LVDS RX	IS		Manufacturer authorization letter
430	STEADFAST	RHFLVDS32AK1	IC-LINE RECEIVER	HAHWA	MICRO SAR	Manufacturer authorization letter
431	STEADFAST	RHFXHR162245K03V	CMOS 16-BT BUFFER TR	IS		Manufacturer authorization letter
432	STEADFAST	RH-PM4423K1	DUAL INVERTING LOW-S	IS		Manufacturer authorization letter
433	STEADFAST	RHR801K01V	COMPARATOR	SATREC		Manufacturer authorization letter
434	STEADFAST	RHRPM4423K01V	DUAL INVERTING MOSFE	IS		Manufacturer authorization letter
435	STEADFAST	RHRXHR162245K1	16-BIT BIDIRECTIONAL	HAHWA	SAT7A	Manufacturer authorization letter
436	STEADFAST	SOX3700RHRG	BJT	MMSYS		Manufacturer authorization letter
437	STEADFAST	STR140N6S1	RAD-HARD N-CHANNEL 6	IS		Manufacturer authorization letter
438	TRI-TECH METALS INC.	0.004INCHX11.9INCHX15.75INCH	STAINLESS STEEL 304	Not under eleven customer		Exclusive agreement



Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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No	Name	Item	Description	CUSTOMER	Program	Category
439	TRI-TECH METALS INC.	0.008INCHX11.9INCHX15.75INCH	STAINLESS STEEL (304	Not under eleven customer		Exclusive agreement
440	TRI-TECH METALS INC.	0.02INCHX11.9INCHX15.75INCH	STAINLESS STEEL (304	Not under eleven customer		Exclusive agreement
441	TRI-TECH METALS INC.	0.03INCHX11.9INCHX15.75INCH	STAINLESS STEEL (304	Not under eleven customer		Exclusive agreement
442	TRI-TECH METALS INC.	0.04INCHX11.9INCHX15.75INCH	STAINLESS STEEL (304	Not under eleven customer		Exclusive agreement
443	TRI-TECH METALS INC.	0.250X4X0.250	ASTM D5989 0.250X4X0	Not under eleven customer		Exclusive agreement
444	TRI-TECH METALS INC.	0.500X1.00X0.00	SAE AMS 3611 0.500X1	Not under eleven customer		Exclusive agreement
445	TRI-TECH METALS INC.	0.500X1.125X12.375	ASTM D5989 0.500X1.1	Not under eleven customer		Exclusive agreement
446	TRI-TECH METALS INC.	0.500X1.75X2.75	ASTM B777-15, CLASS2	Not under eleven customer		Exclusive agreement
447	TRI-TECH METALS INC.	0.500X2.188X3.00	ASTM B777-15, CLASS2	Not under eleven customer		Exclusive agreement
448	TRI-TECH METALS INC.	0.750X0.750X0.4375	ASTM D5989 0.750X0.7	Not under eleven customer		Exclusive agreement
449	TRI-TECH METALS INC.	0.875X0.875X0.4375	ASTM D5989 0.875X0.8	Not under eleven customer		Exclusive agreement
450	TRI-TECH METALS INC.	1.00X1.25X0.250	ASTM D5989 1.00X1.25	Not under eleven customer		Exclusive agreement
451	TRI-TECH METALS INC.	1.00X1.25X3.25	ASTM D5989 1.00X1.25	Not under eleven customer		Exclusive agreement
452	TRI-TECH METALS INC.	1.00X1.375X1.875	ASTM B777-15, CLASS2	Not under eleven customer		Exclusive agreement
453	TRI-TECH METALS INC.	1.00X3.25X9.00	SAE AMS 3611 1.00X3	Not under eleven customer		Exclusive agreement
454	TRI-TECH METALS INC.	1.25X1.438X2.25	ASTM B777-15, CLASS2	Not under eleven customer		Exclusive agreement
455	TRI-TECH METALS INC.	1MA100D06-10010	EXTRUSION	Not under eleven customer		Exclusive agreement
456	TRI-TECH METALS INC.	2.36X40X.40	ASTM B777-15, CLASS2	Not under eleven customer		Exclusive agreement
457	TRI-TECH METALS INC.	2X2X0.25	ASTM D5989 2X2X0.250	Not under eleven customer		Exclusive agreement
458	TRI-TECH METALS INC.	6061-T6 AL ALLOY(ASTM B221)0.375X0.6	6061-T6 AL ALLOY(AST	Not under eleven customer		Exclusive agreement
459	TRI-TECH METALS INC.	6061-T6 AL ALLOY(ASTM B221)0.46X3.60X	6061-T6 AL ALLOY(AST	Not under eleven customer		Exclusive agreement
460	TRI-TECH METALS INC.	6061-T6 AL ALLOY(ASTM B221)0.625X4.00	6061-T6 AL ALLOY(AST	Not under eleven customer		Exclusive agreement
461	TRI-TECH METALS INC.	6061-T6 AL ALLOY(ASTM B221)0.750X0.87	6061-T6 AL ALLOY(AST	Not under eleven customer		Exclusive agreement
462	TRI-TECH METALS INC.	6061-T6 AL ALLOY(ASTM B221)0.875X0.87	6061-T6 AL ALLOY(AST	Not under eleven customer		Exclusive agreement
463	TRI-TECH METALS INC.	6061-T6 AL ALLOY(ASTM B221)0.6X0.6X4	6061-T6 AL ALLOY(AST	Not under eleven customer		Exclusive agreement
464	TRI-TECH METALS INC.	6061-T6 AL ALLOY(ASTM B221)0.800X4.6	6061-T6 AL ALLOY(AST	Not under eleven customer		Exclusive agreement
465	TRI-TECH METALS INC.	6061-T6 AL ALLOY(ASTM B221)1.00X7.00	6061-T6 AL ALLOY(AST	Not under eleven customer		Exclusive agreement
466	TRI-TECH METALS INC.	6X4X0.25	ASTM D5989 6X4X0.250	Not under eleven customer		Exclusive agreement
467	TRI-TECH METALS INC.	AL COLD PLATE CP15G05	ALUMINUM COLD PLATE	Not under eleven customer		Exclusive agreement
468	TRI-TECH METALS INC.	AMS 4050.A7050-T7451.0.99X9.06X13.39	AMS 4050.A7050-T7451	Not under eleven customer		Exclusive agreement
469	TRI-TECH METALS INC.	AMS 4316ALCLAD7075/T7/60.06X48X48	AMS 4316ALCLAD7075/T	Not under eleven customer		Exclusive agreement
470	TRI-TECH METALS INC.	AMS 4610BRASS ROD	FREE CUTTING BARS AN	Not under eleven customer		Exclusive agreement
471	TRI-TECH METALS INC.	AMS 5513 304	STAINLESS STEEL PLAT	Not under eleven customer		Exclusive agreement
472	TRI-TECH METALS INC.	AMS 5519, 301 FULL HARD T0.002, 40X40	AMS 5519, 301 FULL H	Not under eleven customer		Exclusive agreement
473	TRI-TECH METALS INC.	AMS 5519, 301 FULL HARD T0.004, 40X40	AMS 5519, 301 FULL H	Not under eleven customer		Exclusive agreement
474	TRI-TECH METALS INC.	AMS 5519, 301 FULL HARD T0.008, 40X40	AMS 5519, 301 FULL H	Not under eleven customer		Exclusive agreement
475	TRI-TECH METALS INC.	AMS 5643 ROUND 17-4PH 1.875 DIA X 1	AMS 5643 ROUND 17-4P	Not under eleven customer		Exclusive agreement
476	TRI-TECH METALS INC.	AMS 5643 ROUND 17-4PH 1.875DIA X13.0	AMS 5643 ROUND 17-4P	Not under eleven customer		Exclusive agreement
477	TRI-TECH METALS INC.	AMS QQ-S-763, CLASS304 Ø0.63X31.50	AMS QQ-S-763, CLASS3	Not under eleven customer		Exclusive agreement
478	TRI-TECH METALS INC.	AMS QQ-S-763, CLASS304/Ø0.99 X 7.49	AMS QQ-S-763, CLASS3	Not under eleven customer		Exclusive agreement
479	TRI-TECH METALS INC.	AMS QQ-S-764, CLASS 304	AMS QQ-S-764, CLASS	Not under eleven customer		Exclusive agreement
480	TRI-TECH METALS INC.	AMS3660.PTEF 1.58 X 4.41 X 3.86	AMS3660.PTEF 1.75 X	Not under eleven customer		Exclusive agreement
481	TRI-TECH METALS INC.	AMS4016.A5052-H32.0.08X39.4X39.4	AMS4016.A5052-H32.0	Not under eleven customer		Exclusive agreement
482	TRI-TECH METALS INC.	AMS4027 A6061-T6/0.16TX3.35X8.67	AMS4027 A6061-T6/0.1	Not under eleven customer		Exclusive agreement



Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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No	Name	Item	Description	CUSTOMER	Program	Category
483	TRI-TECH METALS INC.	AMS4027 A6061-T6/0.16TX6.70X8.86	AMS4027 A6061-T6/0.1	Not under eleven customer		Exclusive agreement
484	TRI-TECH METALS INC.	AMS4027 ALUM. ALLOY/PLATE/6061T651X	AMS4027 ALUMINIUM, AL	Not under eleven customer		Exclusive agreement
485	TRI-TECH METALS INC.	AMS4050/ALUM 7050-7541/60X2.17X2.17	AMS4050/ALUM 7050-75	Not under eleven customer		Exclusive agreement
486	TRI-TECH METALS INC.	AMS4316/ALCLAD/7075/176/0.08X48X48	AMS4316/ALCLAD/7075/	Not under eleven customer		Exclusive agreement
487	TRI-TECH METALS INC.	AMS4347_6013_T4_0.05X48X48	ALUM_ALLOY_AMS4347_B	Not under eleven customer		Exclusive agreement
488	TRI-TECH METALS INC.	AMS5519 301 FULL HARD SHEET/0.004/23	AMS5519 301 FULL HAR	Not under eleven customer		Exclusive agreement
489	TRI-TECH METALS INC.	AMS5629/SUS H1025.PH13-8MO/Φ3.35X0	AMS5629/SUS H1025.PH	Not under eleven customer		Exclusive agreement
490	TRI-TECH METALS INC.	AMS-5643/H900, 17-4PH/Φ0.47 X 59.06IN	AMS-5643/H900, 17-4P	Not under eleven customer		Exclusive agreement
491	TRI-TECH METALS INC.	AMS-DTL-22499/3	SHEET,LAMINATED, CRE	Not under eleven customer		Exclusive agreement
492	TRI-TECH METALS INC.	AMS-QQ-A-225/9 AL ALLOY/RQD/7075T7	AMS-QQ-A-225/9 ALUMI	Not under eleven customer		Exclusive agreement
493	TRI-TECH METALS INC.	AMS-QQ-A-250/12 7075 T73 0.05X48X48	ALUM_ALLOY_AMS-QQ-A-	Not under eleven customer		Exclusive agreement
494	TRI-TECH METALS INC.	AMS-QQ-A-250/4BARE2024/T81/0.063X48	AMS-QQ-A-250/4BARE20	Not under eleven customer		Exclusive agreement
495	TRI-TECH METALS INC.	AMS-QQ-A-250/4BARE2024/T851/0.25X48	AMS-QQ-A-250/4BARE20	Not under eleven customer		Exclusive agreement
496	TRI-TECH METALS INC.	AMS-QQ-A-250/5 2024-T81CLAD0.05X48	AMS-QQ-A-250/5 2024-	Not under eleven customer		Exclusive agreement
497	TRI-TECH METALS INC.	AMSQQA250/5/ALUMINIUM ALLOY CLAD	AMSQQA250/5/ALUMINIUM	Not under eleven customer		Exclusive agreement
498	TRI-TECH METALS INC.	AMS-QQ-S-763, STS304/Φ2.09X6.38	AMS-QQ-S-763, STS304	Not under eleven customer		Exclusive agreement
499	TRI-TECH METALS INC.	AMS-QQ-S-763, STS304-8/Φ0.39 X 78.74IN	AMS-QQ-S-763, STS304	Not under eleven customer		Exclusive agreement
500	TRI-TECH METALS INC.	AMS-QQ-S-763/CLASS 304/Φ0.63X37.41	AMS-QQ-S-763/CLASS 3	Not under eleven customer		Exclusive agreement
501	TRI-TECH METALS INC.	AMS-QQ-S-763/SUS 304/Φ3.35X0.67	AMS-QQ-S-763/SUS 304/	Not under eleven customer		Exclusive agreement
502	TRI-TECH METALS INC.	ASTM A276 T304/304L STS/Φ36.51(1-7/16)	ASTM A276 T304/304L	Not under eleven customer		Exclusive agreement
503	TRI-TECH METALS INC.	ASTM A564/SUS H1025.17-4PH/Φ3.35X0.6	ASTM A564/SUS H1025,	Not under eleven customer		Exclusive agreement
504	TRI-TECH METALS INC.	ASTM A582-93BAR TYPE303,UNS30300	ASTM A582-93BAR TYPE	Not under eleven customer		Exclusive agreement
505	TRI-TECH METALS INC.	ASTM B209 5052-H32/0.16X48.1X48.1	ASTM B209 5052-H32/	Not under eleven customer		Exclusive agreement
506	TRI-TECH METALS INC.	ASTM B209 5052-H32/0.20X48.1X48.1	ASTM B209 5052-H32/	Not under eleven customer		Exclusive agreement
507	TRI-TECH METALS INC.	ASTM B21 H02 UNS C46400 D55*55L	BAR	Not under eleven customer		Exclusive agreement
508	TRI-TECH METALS INC.	ASTM B36/0.09X20.0X30.0	CARTRIDGE BRASS ALY	Not under eleven customer		Exclusive agreement
509	TRI-TECH METALS INC.	ASTM B36/0.10X24.0X36.0	CARTRIDGE BRASS ALY	Not under eleven customer		Exclusive agreement
510	TRI-TECH METALS INC.	ASTM B777 CLASS2/1.25X1.438X2.25	ASTM B777 CLASS2/1.2	Not under eleven customer		Exclusive agreement
511	TRI-TECH METALS INC.	ASTM D 5989/1.97X1.97X23.65	ASTM D 5989/1.97X1.9	Not under eleven customer		Exclusive agreement
512	TRI-TECH METALS INC.	ASTM D5989 2.00X2.00X0.25	ASTM D5989 2.00X2.00	Not under eleven customer		Exclusive agreement
513	TRI-TECH METALS INC.	ASTM D5989 6.00X4.00X0.25	ASTM D5989 6.00X4.00	Not under eleven customer		Exclusive agreement
514	TRI-TECH METALS INC.	ASTM D5989/0.71X0.71X0.40	ASTM D5989/0.75X0.75	Not under eleven customer		Exclusive agreement
515	TRI-TECH METALS INC.	ASTM D6778/T0.06X23.7X39.38	ASTM D6778/T0.06X23	Not under eleven customer		Exclusive agreement
516	TRI-TECH METALS INC.	ASTM-B152-C10200 COND H02	SHEET,COPPER	Not under eleven customer		Exclusive agreement
517	TRI-TECH METALS INC.	ASTM-D-5989-NYLON(PA)/Φ0.31 X 39.37IN	ASTM-D-5989-NYLON(PA	Not under eleven customer		Exclusive agreement
518	TRI-TECH METALS INC.	ASTMD709TYPE I GRADEXX/PLASTICLAMI	ASTM D709 TYPE I GRA	Not under eleven customer		Exclusive agreement
519	TRI-TECH METALS INC.	DD155029000008	ASTM A322 G41500 D50	Not under eleven customer		Exclusive agreement
520	TRI-TECH METALS INC.	DD1609236039080	SNCM440, D15*L40, BA	Not under eleven customer		Exclusive agreement
521	TRI-TECH METALS INC.	DD2124800002080	BAR UNS G10700 D15.9	Not under eleven customer		Exclusive agreement
522	TRI-TECH METALS INC.	DD2124800003080	BAR UNS G10700 D15.9	Not under eleven customer		Exclusive agreement
523	TRI-TECH METALS INC.	DD2124800004080	BAR, UNS G10700 D15.	Not under eleven customer		Exclusive agreement
524	TRI-TECH METALS INC.	DD2124800005080	UNS G10700 D15.9*6.0	Not under eleven customer		Exclusive agreement
525	TRI-TECH METALS INC.	DD2124800006080	UNS G10700 D15.9X6.0	Not under eleven customer		Exclusive agreement
526	TRI-TECH METALS INC.	DD2124800007080	UNS G10700 D28.6X8.0	Not under eleven customer		Exclusive agreement

Robert Ayers, Project Manager, Norris Associates Technologies, LLC



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No	Name	Item	Description	CUSTOMER	Program	Category
527	TRI-TECH METALS INC.	DD2124800000000	UNS G10700 D28.6*8.0	Not under eleven customer		Exclusive agreement
528	TRI-TECH METALS INC.	DD2124800000000	BAR UNS G10700 D28.6	Not under eleven customer		Exclusive agreement
529	TRI-TECH METALS INC.	DD2124800010000	UNS G10700 D28.6*8.0	Not under eleven customer		Exclusive agreement
530	TRI-TECH METALS INC.	DD2124800010000	UNS G10700 D44.5*10.	Not under eleven customer		Exclusive agreement
531	TRI-TECH METALS INC.	DD2124800012000	UNS G10700 D44.5*10.	Not under eleven customer		Exclusive agreement
532	TRI-TECH METALS INC.	DD2124800014000	BAR UNS G10700 D44.5	Not under eleven customer		Exclusive agreement
533	TRI-TECH METALS INC.	DD2146644000000	BAR, ASTM UNS C62400	Not under eleven customer		Exclusive agreement
534	TRI-TECH METALS INC.	DD2527523000000	A535 G93100 D180*L48	Not under eleven customer		Exclusive agreement
535	TRI-TECH METALS INC.	DD2527714000000	BAR, SUM43 D100*L40	Not under eleven customer		Exclusive agreement
536	TRI-TECH METALS INC.	DD2527716000000	BAR, SUM43 D90*L150	Not under eleven customer		Exclusive agreement
537	TRI-TECH METALS INC.	DD2527717000000	BAR SUM43 D80*L40	Not under eleven customer		Exclusive agreement
538	TRI-TECH METALS INC.	DD2527718000000	BAR SUM43 D80*L40	Not under eleven customer		Exclusive agreement
539	TRI-TECH METALS INC.	DD2527719000000	BAR, SUM43 D90*L40	Not under eleven customer		Exclusive agreement
540	TRI-TECH METALS INC.	DD2527720000000	BAR, UNS G11440 D120	Not under eleven customer		Exclusive agreement
541	TRI-TECH METALS INC.	DD2527721000000	BAR, SUM43 D70*L30 (	Not under eleven customer		Exclusive agreement
542	TRI-TECH METALS INC.	DD2527722000000	BAR SUM43 D80*L50	Not under eleven customer		Exclusive agreement
543	TRI-TECH METALS INC.	DD2527725000000	BAR, ASTM A311,UND30	Not under eleven customer		Exclusive agreement
544	TRI-TECH METALS INC.	DD2527738000000	QQ-N-286 FORM1 D45X3	Not under eleven customer		Exclusive agreement
545	TRI-TECH METALS INC.	DD2527841000000	QQ-C-390 UNS C92300	Not under eleven customer		Exclusive agreement
546	TRI-TECH METALS INC.	DD2527851000000	MIL-S-46850 GR300 D4	Not under eleven customer		Exclusive agreement
547	TRI-TECH METALS INC.	DD2527852000000	BAR, AISI 1144J D30	Not under eleven customer		Exclusive agreement
548	TRI-TECH METALS INC.	DD2527891000000	QQ-N-286 FORM1 D40*L	Not under eleven customer		Exclusive agreement
549	TRI-TECH METALS INC.	DD2527892000000	QQ-N-286 FORM1 D40*L	Not under eleven customer		Exclusive agreement
550	TRI-TECH METALS INC.	DD2527927000000	ASTM A311,UNS G D40X	Not under eleven customer		Exclusive agreement
551	TRI-TECH METALS INC.	DD2527952000000	ASTM A322 G93100 D16	Not under eleven customer		Exclusive agreement
552	TRI-TECH METALS INC.	DD2527959000000	BAR, CDA NO.624 EXT	Not under eleven customer		Exclusive agreement
553	TRI-TECH METALS INC.	DD2527976000000	ASTM A311,UN D80*L35	Not under eleven customer		Exclusive agreement
554	TRI-TECH METALS INC.	DD2527980000000	BAR, AISI 4150 UNS G	Not under eleven customer		Exclusive agreement
555	TRI-TECH METALS INC.	DD2527982000000	UNS T30106 D127*100.	Not under eleven customer		Exclusive agreement
556	TRI-TECH METALS INC.	DD2528185000000	BAR, AMPCO BRONZE GR	Not under eleven customer		Exclusive agreement
557	TRI-TECH METALS INC.	DD2528230000000	BAR, CDA NO.624 D75*	Not under eleven customer		Exclusive agreement
558	TRI-TECH METALS INC.	DD2528247000000	AISI 4150 D80X120, B	Not under eleven customer		Exclusive agreement
559	TRI-TECH METALS INC.	DD2528317000000	CU ALLOY NO.614 D220	Not under eleven customer		Exclusive agreement
560	TRI-TECH METALS INC.	DD2528378000000	CDA NO.614 T25.4*60*	Not under eleven customer		Exclusive agreement
561	TRI-TECH METALS INC.	DD2528389000000	BAR, AL BLONZE D30*1	Not under eleven customer		Exclusive agreement
562	TRI-TECH METALS INC.	DD2528395000000	BAR, UNS C17200 D25X	Not under eleven customer		Exclusive agreement
563	TRI-TECH METALS INC.	DD2528396000000	BAR, UNS C17200 D25X	Not under eleven customer		Exclusive agreement
564	TRI-TECH METALS INC.	DD2528529000000	CDA NO.624 D70*L15.	Not under eleven customer		Exclusive agreement
565	TRI-TECH METALS INC.	DD2528534000000	AMPCO BRONZE GR 8 D5	Not under eleven customer		Exclusive agreement
566	TRI-TECH METALS INC.	DD2528535000000	AL BRONZE AMS 4640 D	Not under eleven customer		Exclusive agreement
567	TRI-TECH METALS INC.	DD2528591000000	BAR, CDA624 D60X70	Not under eleven customer		Exclusive agreement
568	TRI-TECH METALS INC.	DD2528593000000	BAR, QQ-B-637 D25X70	Not under eleven customer		Exclusive agreement
569	TRI-TECH METALS INC.	DD2528662000000	AMPCO BRONZE GR 8 D7	Not under eleven customer		Exclusive agreement
570	TRI-TECH METALS INC.	DD2528739000000	BAR, AMPCO BRONZE GR	Not under eleven customer		Exclusive agreement



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571	TRI-TECH METALS INC.	DD25287660000P0	CRES 17-4PH T31.8*30	Not under eleven customer		Exclusive agreement
572	TRI-TECH METALS INC.	DD25307920000B0	UNS C61400 D190.5*L2	Not under eleven customer		Exclusive agreement
573	TRI-TECH METALS INC.	DD25308090000B0	BAR, AISI 1137 D50*9	Not under eleven customer		Exclusive agreement
574	TRI-TECH METALS INC.	DD25310130000B0	BAR UNS G11440 D90*3	Not under eleven customer		Exclusive agreement
575	TRI-TECH METALS INC.	DD25310250000B0	BAR SUM43 D80*L40	Not under eleven customer		Exclusive agreement
576	TRI-TECH METALS INC.	DD25310260000B0	BAR SUM43 D80*L40	Not under eleven customer		Exclusive agreement
577	TRI-TECH METALS INC.	DD25310510000P0	PLATE, ASTM A322.G41	Not under eleven customer		Exclusive agreement
578	TRI-TECH METALS INC.	DD25310520000P0	PLATE, ASTM A322.G41	Not under eleven customer		Exclusive agreement
579	TRI-TECH METALS INC.	DD25310560000B0	BAR, UNS C62400 D60*	Not under eleven customer		Exclusive agreement
580	TRI-TECH METALS INC.	DD25310570000B0	BAR, UNS C62400 D60*	Not under eleven customer		Exclusive agreement
581	TRI-TECH METALS INC.	DD25311820000B0	UNS G41500 D114.3*80	Not under eleven customer		Exclusive agreement
582	TRI-TECH METALS INC.	DD25312330000B0	AISI4150 D50*L450, 8	Not under eleven customer		Exclusive agreement
583	TRI-TECH METALS INC.	DD25312340000B0	AISI4150 D50*L365, 8	Not under eleven customer		Exclusive agreement
584	TRI-TECH METALS INC.	DD25312360000B0	BAR, A535 G93106 D70	Not under eleven customer		Exclusive agreement
585	TRI-TECH METALS INC.	DD25312580000B0	QQ-N-286 (D25.4*170)	Not under eleven customer		Exclusive agreement
586	TRI-TECH METALS INC.	DD25312770000B0	QQ-N-286 (D25.4*285)	Not under eleven customer		Exclusive agreement
587	TRI-TECH METALS INC.	DD25313070000B0	CDA NO.624 D70*L70.	Not under eleven customer		Exclusive agreement
588	TRI-TECH METALS INC.	DD25313080000B0	CDA NO.624 D70*L70.	Not under eleven customer		Exclusive agreement
589	TRI-TECH METALS INC.	DD25313090000B0	BAR, CDA NO.624 D70*	Not under eleven customer		Exclusive agreement
590	TRI-TECH METALS INC.	DD25313450000B0	MONEL 500 (D31.8*450)	Not under eleven customer		Exclusive agreement
591	TRI-TECH METALS INC.	DD25313460000B0	MONEL 500 (D31.8*450)	Not under eleven customer		Exclusive agreement
592	TRI-TECH METALS INC.	DD25313470000B0	MONEL 500 (D31.8*450)	Not under eleven customer		Exclusive agreement
593	TRI-TECH METALS INC.	DD25313480000B0	MONEL 500 (D31.8*450)	Not under eleven customer		Exclusive agreement
594	TRI-TECH METALS INC.	DD25313490000B0	UNS C62400 (D76.2*16	Not under eleven customer		Exclusive agreement
595	TRI-TECH METALS INC.	DD25313500000B0	UNS C62400 (D76.2*16	Not under eleven customer		Exclusive agreement
596	TRI-TECH METALS INC.	DD25315220000P0	AISI1070T1.8290.07	Not under eleven customer		Exclusive agreement
597	TRI-TECH METALS INC.	DD25315660000B0	BAR, CDA NO.623 D25*	Not under eleven customer		Exclusive agreement
598	TRI-TECH METALS INC.	DD25316810000B0	UNS C62400 D30*10, 8	Not under eleven customer		Exclusive agreement
599	TRI-TECH METALS INC.	DD25319960000B0	BAR, CDA NO.623 D40*	Not under eleven customer		Exclusive agreement
600	TRI-TECH METALS INC.	DD25320620000B0	CDA NO.624 D45*L30.	Not under eleven customer		Exclusive agreement
601	TRI-TECH METALS INC.	DD25320630000B0	CDA NO.624 D50*L50.	Not under eleven customer		Exclusive agreement
602	TRI-TECH METALS INC.	DD25322890000B0	QQ-N-286 (D31.8*130)	Not under eleven customer		Exclusive agreement
603	TRI-TECH METALS INC.	DD25452260000B0	QQ-N-286 FORM1 D45*L	Not under eleven customer		Exclusive agreement
604	TRI-TECH METALS INC.	DD25452340000B0	QQ-S-624 8640 D140*3	Not under eleven customer		Exclusive agreement
605	TRI-TECH METALS INC.	DD25452430000B0	UNS C61400 D290*L20.	Not under eleven customer		Exclusive agreement
606	TRI-TECH METALS INC.	DD25452740000B0	BAR, UNS G41500 D88.	Not under eleven customer		Exclusive agreement
607	TRI-TECH METALS INC.	DD25937840020B0	UNS S17400 D5X40, 8A	Not under eleven customer		Exclusive agreement
608	TRI-TECH METALS INC.	DD25937841140B0	UNS S17400 D6X90, 8A	Not under eleven customer		Exclusive agreement
609	TRI-TECH METALS INC.	DD25937842010B0	BAR UNS S17400 D15X3	Not under eleven customer		Exclusive agreement
610	TRI-TECH METALS INC.	DD25937842030B0	BAR UNS S17400 D15X4	Not under eleven customer		Exclusive agreement
611	TRI-TECH METALS INC.	DD25937843130B0	BAR UNS S17400 D15X6	Not under eleven customer		Exclusive agreement
612	TRI-TECH METALS INC.	DD25937844010B0	UNS S17400 D15X40, 8	Not under eleven customer		Exclusive agreement
613	TRI-TECH METALS INC.	DD25937844030B0	BAR, UNS S17400 D15X	Not under eleven customer		Exclusive agreement
614	TRI-TECH METALS INC.	DD25937844130B0	BAR UNS S17400 D15X6	Not under eleven customer		Exclusive agreement

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615	TRI-TECH METALS INC.	DD2593784425080	UNS S17400 D10X100,	Not under eleven customer		Exclusive agreement
616	TRI-TECH METALS INC.	DD2593784609080	BAR, UNS S17400 D20X	Not under eleven customer		Exclusive agreement
617	TRI-TECH METALS INC.	DD2635400000080	BAR/LINK, QQ-S-624 F	Not under eleven customer		Exclusive agreement
618	TRI-TECH METALS INC.	DD2859938000080	BAR, CDA NO.624 D70*	Not under eleven customer		Exclusive agreement
619	TRI-TECH METALS INC.	DD2859942000080	BAR, CDA NO.624 D45*	Not under eleven customer		Exclusive agreement
620	TRI-TECH METALS INC.	DD2859943000080	BAR, CDA NO.624 D50*	Not under eleven customer		Exclusive agreement
621	TRI-TECH METALS INC.	DD2860210000080	QQ-N-286 D31.8*265,	Not under eleven customer		Exclusive agreement
622	TRI-TECH METALS INC.	DD2860211000080	QQ-N-286 D31.8*195,	Not under eleven customer		Exclusive agreement
623	TRI-TECH METALS INC.	DD2860378000080	C6241 D450X25, BAR	Not under eleven customer		Exclusive agreement
624	TRI-TECH METALS INC.	DD3012344000080	UNS C62300 D115*160,	Not under eleven customer		Exclusive agreement
625	TRI-TECH METALS INC.	DD3027832000080	BAR, AISI 1090 D1.6X	Not under eleven customer		Exclusive agreement
626	TRI-TECH METALS INC.	DD3176331000080	BAR, UNS C62400 D55X	Not under eleven customer		Exclusive agreement
627	TRI-TECH METALS INC.	DD5596357000080	BAR, UNS C62400 (D76	Not under eleven customer		Exclusive agreement
628	TRI-TECH METALS INC.	DD5596928000080	17-4PH UNS S17400,D2	Not under eleven customer		Exclusive agreement
629	TRI-TECH METALS INC.	DD5596929000080	17-4PH,UNS S17400,D4	Not under eleven customer		Exclusive agreement
630	TRI-TECH METALS INC.	DD5830644000080	17-4PH-H1025 D60*160	Not under eleven customer		Exclusive agreement
631	TRI-TECH METALS INC.	DD5830902000080	UNS C62400 D80*140,	Not under eleven customer		Exclusive agreement
632	TRI-TECH METALS INC.	DD6138832000080	BAR, UNS C62400 (76,	Not under eleven customer		Exclusive agreement
633	TRI-TECH METALS INC.	DD6138852000080	MIL-S-46850,D65X530,	Not under eleven customer		Exclusive agreement
634	TRI-TECH METALS INC.	DD6162692000080	UNS G41500 RESULF D2	Not under eleven customer		Exclusive agreement
635	TRI-TECH METALS INC.	DD6296813000080	MIL-S-46850B GR300 D	Not under eleven customer		Exclusive agreement
636	TRI-TECH METALS INC.	DD7249217000080	BAR UNS S17400 D20X1	Not under eleven customer		Exclusive agreement
637	TRI-TECH METALS INC.	DD7249230000080	QQ-N-286,UNS N05500	Not under eleven customer		Exclusive agreement
638	TRI-TECH METALS INC.	DD7249231000080	QQ-N-286,UNS N05500	Not under eleven customer		Exclusive agreement
639	TRI-TECH METALS INC.	DD7249232000080	QQ-N-286,UNS N05500	Not under eleven customer		Exclusive agreement
640	TRI-TECH METALS INC.	DD7249233000080	BAR, UNS C63000 D90X	Not under eleven customer		Exclusive agreement
641	TRI-TECH METALS INC.	DD7249234000080	BAR, UNS C63000 D100	Not under eleven customer		Exclusive agreement
642	TRI-TECH METALS INC.	DD7249235000080	UNS C63000 D110X350,	Not under eleven customer		Exclusive agreement
643	TRI-TECH METALS INC.	DD7249245000080	AMS 3670/3 D60X70, B	Not under eleven customer		Exclusive agreement
644	TRI-TECH METALS INC.	DD7249251000080	AMS 3670/3 D40X35, B	Not under eleven customer		Exclusive agreement
645	TRI-TECH METALS INC.	DD7249252000080	AMS 3670/3 D50X55, B	Not under eleven customer		Exclusive agreement
646	TRI-TECH METALS INC.	DD7249253000080	AMS 3670/3 D60X55, B	Not under eleven customer		Exclusive agreement
647	TRI-TECH METALS INC.	DD7249254000080	BAR, ASTM B777CL11,M	Not under eleven customer		Exclusive agreement
648	TRI-TECH METALS INC.	DD7249255000080	BAR, UNS C63000 D30X	Not under eleven customer		Exclusive agreement
649	TRI-TECH METALS INC.	DD7249312000080	UNS N05500 D100X980,	Not under eleven customer		Exclusive agreement
650	TRI-TECH METALS INC.	DD7249328000080	PLATE, UNS K11510 (T	Not under eleven customer		Exclusive agreement
651	TRI-TECH METALS INC.	DD7249329000080	PLATE, UNS K11510 (T	Not under eleven customer		Exclusive agreement
652	TRI-TECH METALS INC.	DD7249334000080	BAR, ASTM B150 UNS C	Not under eleven customer		Exclusive agreement
653	TRI-TECH METALS INC.	DD7249335000080	BAR, ASTM B150 UNS C	Not under eleven customer		Exclusive agreement
654	TRI-TECH METALS INC.	DD7249384000080	AMS5643 UNS S17400 D	Not under eleven customer		Exclusive agreement
655	TRI-TECH METALS INC.	DD7249387000080	AMS5643 UNS S17400 D	Not under eleven customer		Exclusive agreement
656	TRI-TECH METALS INC.	DD7249390000080	AMS5643 UNS S17400 D	Not under eleven customer		Exclusive agreement
657	TRI-TECH METALS INC.	DD7249484000080	BAR, AMS 6308 UNS K7	Not under eleven customer		Exclusive agreement
658	TRI-TECH METALS INC.	DD7249485000080	AMS 6308 UNS K71040	Not under eleven customer		Exclusive agreement



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659	TRI-TECH METALS INC.	DD724948700000B	AMS 6308 UNS K71040	Not under eleven customer		Exclusive agreement
660	TRI-TECH METALS INC.	DD724949100000B	BAR, UNS G93106 (D82)	Not under eleven customer		Exclusive agreement
661	TRI-TECH METALS INC.	DD724950800000B	BAR, GEAR, SPUR, 17-4P	Not under eleven customer		Exclusive agreement
662	TRI-TECH METALS INC.	DD724951700000B	AMS 6527(AFI410) D50	Not under eleven customer		Exclusive agreement
663	TRI-TECH METALS INC.	DD725015000000B	BRACKET, CASTING, UNS	Not under eleven customer		Exclusive agreement
664	TRI-TECH METALS INC.	DD725033400000B	ASTM B21 H02 UNS C46	Not under eleven customer		Exclusive agreement
665	TRI-TECH METALS INC.	DD725124900000B	BAR, UNS C63000, D50X	Not under eleven customer		Exclusive agreement
666	TRI-TECH METALS INC.	DD725125000000B	BAR, UNS C63000, D50X	Not under eleven customer		Exclusive agreement
667	TRI-TECH METALS INC.	DD725158800000B	UNS S17400 D150*100	Not under eleven customer		Exclusive agreement
668	TRI-TECH METALS INC.	DD725158900000B	UNS S17400 D150*100	Not under eleven customer		Exclusive agreement
669	TRI-TECH METALS INC.	DD731092003000B	BAR, PIN, DOWEL, UNS G	Not under eleven customer		Exclusive agreement
670	TRI-TECH METALS INC.	DD731096005000B	AMPCO GR 18 D70X50	Not under eleven customer		Exclusive agreement
671	TRI-TECH METALS INC.	DD731443002000B	BAR, LINK, AS, DRIVING	Not under eleven customer		Exclusive agreement
672	TRI-TECH METALS INC.	DD731443003000B	BAR, LINK, SAFETY, AIS	Not under eleven customer		Exclusive agreement
673	TRI-TECH METALS INC.	DD731697002000B	BAR, SUM41, D160X30	Not under eleven customer		Exclusive agreement
674	TRI-TECH METALS INC.	DD731698005000B	BAR, SUM43 D60*L20	Not under eleven customer		Exclusive agreement
675	TRI-TECH METALS INC.	DD733369002000B	BAR, SUM43 D50*L30	Not under eleven customer		Exclusive agreement
676	TRI-TECH METALS INC.	DD733369008000B	BAR, SUM43 D30*L20	Not under eleven customer		Exclusive agreement
677	TRI-TECH METALS INC.	DD733750004000B	BAR, MIL-S-869, 135M	Not under eleven customer		Exclusive agreement
678	TRI-TECH METALS INC.	DD961009600000B	AMS 6527 AFI410 D180	Not under eleven customer		Exclusive agreement
679	TRI-TECH METALS INC.	DD990007800000B	BAR, DISK, SPUNED, SU	Not under eleven customer		Exclusive agreement
680	TRI-TECH METALS INC.	DD990008100000B	UNS G41500 RESULF D1	Not under eleven customer		Exclusive agreement
681	TRI-TECH METALS INC.	DD990008300000B	BAR, GEAR, SHAFT-1-SPUR	Not under eleven customer		Exclusive agreement
682	TRI-TECH METALS INC.	DD990008800000B	GEAR-1-SPUR-INTERNAL	Not under eleven customer		Exclusive agreement
683	TRI-TECH METALS INC.	DD990009200000B	BAR, PLATE, LEVER, MOUN	Not under eleven customer		Exclusive agreement
684	TRI-TECH METALS INC.	DD990009300000B	BAR, PIN, LEVER, DRILL	Not under eleven customer		Exclusive agreement
685	TRI-TECH METALS INC.	DD990009500000B	DRILL, ROD D5X18, BAR	Not under eleven customer		Exclusive agreement
686	TRI-TECH METALS INC.	DD990011300000B	BAR, SPACER, Q-Q-C-390	Not under eleven customer		Exclusive agreement
687	TRI-TECH METALS INC.	DD990015600000B	BAR, GEAR-1-SPUR AISI	Not under eleven customer		Exclusive agreement
688	TRI-TECH METALS INC.	DD990015700000B	BAR, GEAR-1-SPUR AISI	Not under eleven customer		Exclusive agreement
689	TRI-TECH METALS INC.	DD990016400000B	BAR, GEAR-1-SPUR, UNS	Not under eleven customer		Exclusive agreement
690	TRI-TECH METALS INC.	DD990016500000B	BAR, GEAR-1-SPUR, UNS	Not under eleven customer		Exclusive agreement
691	TRI-TECH METALS INC.	DD990016600000B	UNS G41500, D70X115	Not under eleven customer		Exclusive agreement
692	TRI-TECH METALS INC.	DD990028000000B	DYNALLOY 602 D38*L75	Not under eleven customer		Exclusive agreement
693	TRI-TECH METALS INC.	DD990028100000B	DYNALLOY 602 D25*L60	Not under eleven customer		Exclusive agreement
694	TRI-TECH METALS INC.	DD990028300000B	DYNALLOY 602 D38*L75	Not under eleven customer		Exclusive agreement
695	TRI-TECH METALS INC.	DIA3/8X 0.393	ASTM D5989 DIA3/8X 0	Not under eleven customer		Exclusive agreement
696	TRI-TECH METALS INC.	DIA5/8X 0.393	ASTM D5989 DIA5/8X 0	Not under eleven customer		Exclusive agreement
697	TRI-TECH METALS INC.	EN AW-6082, T6/T651/T0.24IN X 4.33IN X	EN AW-6082, T6/T651/	Not under eleven customer		Exclusive agreement
698	TRI-TECH METALS INC.	EN AW-6082, T6/T651/T0.31IN X 0.63IN X	EN AW-6082, T6/T651/	Not under eleven customer		Exclusive agreement
699	TRI-TECH METALS INC.	EN AW-6082, T6/T651/T0.39IN X 0.59IN X	EN AW-6082, T6/T651/	Not under eleven customer		Exclusive agreement
700	TRI-TECH METALS INC.	EN AW-6082, T6/T651/T0.39IN X 4.06IN X	EN AW-6082, T6/T651/	Not under eleven customer		Exclusive agreement
701	TRI-TECH METALS INC.	FAB4409647-003	AMS-QQ-S-763, STS304	Not under eleven customer		Exclusive agreement
702	TRI-TECH METALS INC.	FAB4409645-003	ASTM B777-15, CLASS	Not under eleven customer		Exclusive agreement

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703	TRI-TECH METALS INC.	FA84409691-003	ASTM B777-15, CLASS	Not under eleven customer		Exclusive agreement
704	TRI-TECH METALS INC.	FA84409705-003	AMS-QQ-S-763, STS316	Not under eleven customer		Exclusive agreement
705	TRI-TECH METALS INC.	FA84409824-003	AMS 5513 STS304CSP-A	Not under eleven customer		Exclusive agreement
706	TRI-TECH METALS INC.	FA84409824-003-2	AMS 5519-301/70.004X	Not under eleven customer		Exclusive agreement
707	TRI-TECH METALS INC.	FA84409834-003	ASTM B777-15, CLASS 2	Not under eleven customer		Exclusive agreement
708	TRI-TECH METALS INC.	FA84409852-003	AMS 4117 A6061-T6+Q2	Not under eleven customer		Exclusive agreement
709	TRI-TECH METALS INC.	FA84409866-003	AMS 4117 A6061-T6+Q2	Not under eleven customer		Exclusive agreement
710	TRI-TECH METALS INC.	FA84409876-003	AMS 4117 A6061-T6+Q2	Not under eleven customer		Exclusive agreement
711	TRI-TECH METALS INC.	FA84409881-003	AMS 4117 A6061-T6+Q2	Not under eleven customer		Exclusive agreement
712	TRI-TECH METALS INC.	FA84409891-003	AMS 4117 A6061-T6+Q2	Not under eleven customer		Exclusive agreement
713	TRI-TECH METALS INC.	FA84409901-003	AMS 4117 A6061-T6+Q2	Not under eleven customer		Exclusive agreement
714	TRI-TECH METALS INC.	FA84409919-003	AMS 4016 A5052H-32+T	Not under eleven customer		Exclusive agreement
715	TRI-TECH METALS INC.	FA84409930-003	ASTM B777-15, CLASS 2	Not under eleven customer		Exclusive agreement
716	TRI-TECH METALS INC.	FA84409931-003	ASTM B777-15, CLASS 2	Not under eleven customer		Exclusive agreement
717	TRI-TECH METALS INC.	FA84409932-003	ASTM B777-15, CLASS 2	Not under eleven customer		Exclusive agreement
718	TRI-TECH METALS INC.	FA84409933-003	ASTM B777-15, CLASS 2	Not under eleven customer		Exclusive agreement
719	TRI-TECH METALS INC.	FA84409934-003	ASTM B777-15, CLASS 2	Not under eleven customer		Exclusive agreement
720	TRI-TECH METALS INC.	FA84409935-003	ASTM B777-15, CLASS 2	Not under eleven customer		Exclusive agreement
721	TRI-TECH METALS INC.	FA84409936-003	ASTM B777-15, CLASS 2	Not under eleven customer		Exclusive agreement
722	TRI-TECH METALS INC.	FA84409937-003	ASTM B777-15, CLASS 2	Not under eleven customer		Exclusive agreement
723	TRI-TECH METALS INC.	FA84410629-003	AMS-QQ-S-763, STS316	Not under eleven customer		Exclusive agreement
724	TRI-TECH METALS INC.	FA84410632-003	AMS-QQ-S-763, STS316	Not under eleven customer		Exclusive agreement
725	TRI-TECH METALS INC.	FA84410634-003	AMS-QQ-S-763, STS316	Not under eleven customer		Exclusive agreement
726	TRI-TECH METALS INC.	FA84413009-003	AMS-QQ-S-763, STS304	Not under eleven customer		Exclusive agreement
727	TRI-TECH METALS INC.	H02(1/2 HARD)ASTM B36/0.010X1.0X1.25	CARTRIDGE BRASS ALY	Not under eleven customer		Exclusive agreement
728	TRI-TECH METALS INC.	L-605	BAR, ASTM F90-09, DI	Not under eleven customer		Exclusive agreement
729	TRI-TECH METALS INC.	MIL-I-24768/2 - GEE 10	MIL-I-24768/2 - GEE	Not under eleven customer		Exclusive agreement
730	TRI-TECH METALS INC.	MIL-S-5059STAINLESS STEEL304/2.25X1.5	MIL-S-5059STAINLESS	Not under eleven customer		Exclusive agreement
731	TRI-TECH METALS INC.	MIL-S-5059STAINLESS STEEL304/2.25X4X6	MIL-S-5059STAINLESS	Not under eleven customer		Exclusive agreement
732	TRI-TECH METALS INC.	MMS 1597075/77351X0.25X3.875X6.25	MMS 1597075/77351/0	Not under eleven customer		Exclusive agreement
733	TRI-TECH METALS INC.	MMS 1597075/773511.25X2.83X3.6	MMS 1597075/77351/1	Not under eleven customer		Exclusive agreement
734	TRI-TECH METALS INC.	MMS 1597075/773511.25X7.3X7.34	MMS 1597075/77351/1	Not under eleven customer		Exclusive agreement
735	TRI-TECH METALS INC.	MMS 1597075/773511.5X3.7X6.03	MMS 1597075/77351/1	Not under eleven customer		Exclusive agreement
736	TRI-TECH METALS INC.	MMS 1597075/773511.5X9.73X11	MMS 1597075/77351/1	Not under eleven customer		Exclusive agreement
737	TRI-TECH METALS INC.	MMS 1597075/773513.5X6.05X10.4	MMS 1597075/77351/3	Not under eleven customer		Exclusive agreement
738	TRI-TECH METALS INC.	MMS 1597075/773513X3.37X4.37	MMS 1597075/77351/3X	Not under eleven customer		Exclusive agreement
739	TRI-TECH METALS INC.	MMS1597075/773512.5X4.25X5.5	MMS1597075/77351/2.5	Not under eleven customer		Exclusive agreement
740	TRI-TECH METALS INC.	MMS1597075/773512.5X4X5.7	MMS1597075/77351/2.5	Not under eleven customer		Exclusive agreement
741	TRI-TECH METALS INC.	N2121011	BAR, AMS-QQ-S-763, S	Not under eleven customer		Exclusive agreement
742	TRI-TECH METALS INC.	N2121012	BAR, AMS-QQ-S-763, S	Not under eleven customer		Exclusive agreement
743	TRI-TECH METALS INC.	N2121013	BAR, AMS-QQ-S-763, S	Not under eleven customer		Exclusive agreement
744	TRI-TECH METALS INC.	PASTICK LAMINATED /L-P-513TYPE PBG/	PASTICK LAMINATED /	Not under eleven customer		Exclusive agreement
745	TRI-TECH METALS INC.	QQ-A-250/11 AL ALLOY/PLATE/6061T6S1	QQ-A-250/11 ALUMINIUM	Not under eleven customer		Exclusive agreement
746	TRI-TECH METALS INC.	QQ-A-250/13/ALCIAD/7075/T6/0.04X48X	QQ-A-250/13/ALCIAD/7	Not under eleven customer		Exclusive agreement



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No	Name	Item	Description	CUSTOMER	Program	Category
747	TRI-TECH METALS INC.	QQ-A-250/4,2024-T3	SHEET,AL(063" x 48"	Not under eleven customer		Exclusive agreement
748	TRI-TECH METALS INC.	QQ-A-250/5/ALUMINUM ALLOY CLAD/20	QQ-A-250/5/ALUMINUM	Not under eleven customer		Exclusive agreement
749	TRI-TECH METALS INC.	RW-175-3/64-X-STK	TUBE-SHRINKAGE	Not under eleven customer		Exclusive agreement
750	TRI-TECH METALS INC.	SR3353P00202	SHEET, MIL-S-13281,C	Not under eleven customer		Exclusive agreement
751	TRI-TECH METALS INC.	SR3353P00302	SHEET, MIL-S-13281,C	Not under eleven customer		Exclusive agreement
752	TRI-TECH METALS INC.	SR3353P00792	SHEET, MIL-S-13281,C	Not under eleven customer		Exclusive agreement
753	TRI-TECH METALS INC.	SR3354P00202	SHEET, MIL-S-13281,C	Not under eleven customer		Exclusive agreement
754	TRI-TECH METALS INC.	SR3354P00482	SHEET, MIL-S-13281,C	Not under eleven customer		Exclusive agreement
755	TRI-TECH METALS INC.	SR3358P00642	SHEET, MIL-S-13281,C	Not under eleven customer		Exclusive agreement
756	TRI-TECH METALS INC.	SR3358P00792	SHEET, MIL-S-13281,C	Not under eleven customer		Exclusive agreement
757	TRI-TECH METALS INC.	SR3358P00793	SHEET, MIL-S-13281,C	Not under eleven customer		Exclusive agreement
758	TRI-TECH METALS INC.	SR3358P00952	SHEET, MIL-S-13281,C	Not under eleven customer		Exclusive agreement
759	TRI-TECH METALS INC.	SR3358P01752	SHEET, MIL-S-13281,C	Not under eleven customer		Exclusive agreement
760	TRI-TECH METALS INC.	STAINLESS BAR 15-5 CRES CONDTN A Ø	STAINLESS BAR 15-5 C	Not under eleven customer		Exclusive agreement
761	TRI-TECH METALS INC.	STS 316L/ASTM A276-13A/1.18 Φ X 39.38	STS 316L/ASTM A276-1	Not under eleven customer		Exclusive agreement
762	TRI-TECH METALS INC.	Ti6AL-4V T1.25 X 2.25 X 2.50	Ti6AL-4V T1.25" X 2	Not under eleven customer		Exclusive agreement
763	TRI-TECH METALS INC.	TI-6AL-4V GR5 0.875X19.70	TI-6AL-4V GR5 Ø 79X1	Not under eleven customer		Exclusive agreement
764	TRI-TECH METALS INC.	Φ28.575 (1-1/8"72)	AMS-QQ-A-225/6-T851	Not under eleven customer		Exclusive agreement
765	AGM CONTAINER CONTROLS	920005	PACKING-SILICAGEL	HANWHA	HSC R&D	Non-agreement, but sole supplier
766	AGM CONTAINER CONTROLS	10BR12A16	SILICAGEL	HANWHA	TGP	Non-agreement, but sole supplier
767	AGM CONTAINER CONTROLS	BLD7410/10	SILICA GEL	HANWHA	SEC R&D	Non-agreement, but sole supplier
768	AGM CONTAINER CONTROLS	BLD1519	OTHER MECHA-MOISTURE	HANWHA	PKG	Non-agreement, but sole supplier
769	AGM CONTAINER CONTROLS	T364-SG-246P	UNIT-DESICCATOR	HANWHA	SEEKER	Non-agreement, but sole supplier
770	AGM CONTAINER CONTROLS	TA238-037-3	RELIEF VALVE	SSTANDARD	SSTANDARD	Non-agreement, but sole supplier
771	AGM CONTAINER CONTROLS	TA240-05-05-R	BREATHER VALVE	SSTANDARD	SSTANDARD	Non-agreement, but sole supplier
772	AGM CONTAINER CONTROLS	TA289-2844	VALVE-BREATH	HANWHA	30MM Anti-Aircraft Gun	Non-agreement, but sole supplier
773	AGM CONTAINER CONTROLS	TA292-05-05-R	VALVE	HANWHA	LAH	Non-agreement, but sole supplier
774	AGM CONTAINER CONTROLS	TA348-234P	UNIT-HUMIDITY INDICAT	HANWHA	30MM Anti-Aircraft Gun	Non-agreement, but sole supplier
775	AGM CONTAINER CONTROLS	TA356-2345P	HUMIDITY INDICATOR	HANWHA	MANAHAIM	Non-agreement, but sole supplier
776	AGM CONTAINER CONTROLS	TA370-234P	HUMIDITYINDICATOR	HANWHA	FFX-III	Non-agreement, but sole supplier
777	AGM CONTAINER CONTROLS	TA495-1461	CAP	HANWHA	MANAHAIM	Non-agreement, but sole supplier
778	AGM CONTAINER CONTROLS	TA770-1302	VALVE	HANWHA	MANAHAIM	Non-agreement, but sole supplier
779	Amglo Kemlite Labs. Inc.	AQL-3550	LAMP-FLASH-LAMP	HANWHA	TAS-815K	Non-agreement, but sole supplier
780	COMPUTER CONVERSIONS CORP	MRDC7540-3	IC-A/D CONVERTER,R/D	HANWHA	K21	Non-agreement, but sole supplier
781	WENZEL INTERNATIONAL INC	96136425	QUARTZ	HANWHA	KSAM	Non-agreement, but sole supplier
782	WENZEL INTERNATIONAL INC	96136425-568 REV	QUARTZ	HANWHA	KSAM	Non-agreement, but sole supplier
783	ITT Enidine Incorporated	WR12-800-08-S	SHOCK ABSORBOR	MMSYS		Non-agreement, but sole supplier
784	ITT Enidine Incorporated	WR12-806-06-SM	ABSORBER-WIRE ROPE I	MMSYS		Non-agreement, but sole supplier
785	ITT Enidine Incorporated	WR16-400-08-EM	ISOLATOR	MMSYS		Non-agreement, but sole supplier
786	ITT Enidine Incorporated	WR16-600-08-EM	ISOLATOR	MMSYS		Non-agreement, but sole supplier
787	ITT Enidine Incorporated	WR8-600-08-8M	ABSORBER-WIRE ROPE I	HANWHA	FFX-III	Non-agreement, but sole supplier
788	ITT Enidine Incorporated	WR8900088M	BUFFER	MMSYS		Non-agreement, but sole supplier
789	FIRST SENSOR INC.	500798	DIODE-LASER	HANWHA	HSC R&D	Non-agreement, but sole supplier
790	FIRST SENSOR INC.	501526	DIODE-LASERQP45-Q TO	HANWHA	SATELLITE	Non-agreement, but sole supplier

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No	Name	Item	Description	CUSTOMER	Program	Category
791	FIRST SENSOR INC.	3001433	DIODE-LASER	HANWHA	LAH	Non-agreement, but sole supplier
792	FIRST SENSOR INC.	50131304	DIODE-LASER-OP154-Q	HANWHA	OPTICAL SEEKER	Non-agreement, but sole supplier
793	FIRST SENSOR INC.	50131305	DIODE-LASER	HANWHA	SAL	Non-agreement, but sole supplier
794	TELEDYNE JUDSON TECHNOLOGY	J10D-J508-R04M-60	SENSOR-INSB DETECTOR	HANWHA	HSC R&D	Non-agreement, but sole supplier
795	TELEDYNE JUDSON TECHNOLOGY	J10D-J508-R04M-60-SP28	SENSOR-INSB DETECTOR	HANWHA	HSC R&D	Non-agreement, but sole supplier
796	TELEDYNE JUDSON TECHNOLOGY	J16P5-BEG-505M-HIS	Position SENSING Det	HANWHA	PKG-B	Non-agreement, but sole supplier
797	TELEDYNE JUDSON TECHNOLOGY	PA-9-44	AMPLIFIER-FOR INSB D	HANWHA	HSC R&D	Non-agreement, but sole supplier
798	KEYSTONE ELECTRONICS CORP	C-16681-AIR	TERMINAL TURRET	HANWHA	IFF	Non-agreement, but sole supplier
799	KEYSTONE ELECTRONICS CORP	C-16708-AIR	TERMINAL FEEDTHROUGH	HANWHA	IFF	Non-agreement, but sole supplier
800	SHENZHEN LONGSUN ACOUSTIC	DR46-5H17.5-75	AUDIO-RECEIVER	HANWHA	KSS	Non-agreement, but sole supplier
801	SHENZHEN LONGSUN ACOUSTIC	ER46H17-75	TRANSDUCER	HANWHA	HSC MASS	Non-agreement, but sole supplier
802	NORTHROP GRUMMAN SYNOPTIC	481173	Cr+4-YAG FILTER PASS	HANWHA	TAS-815K, K2, K21	Non-agreement, but sole supplier
803	NORTHROP GRUMMAN SYNOPTIC	Y5510	ND-YAG ROD	HANWHA	TAS-815K, K2, K21	Non-agreement, but sole supplier
804	Premier Technical Services	M2200NC-T-DP-24-HI-FG03-FG03(+)	NETWORK SWITCHES-(+)	HANWHA	MSAM	Non-agreement, but sole supplier
805	Premier Technical Services	M2200TDP24HICG02CG02CG021FG0	NETWORK SWITCHES-FIB	HANWHA	MSAM-II	Non-agreement, but sole supplier
806	Premier Technical Services	M2200TDP24HIFG03FG03CG02CG021CG0	NETWORK SWITCHES-FIB	HANWHA	MSAM-II	Non-agreement, but sole supplier
807	S&K Electronics	1664004-807	COUPLER,MUX BUS	KAI	FA50	Non-agreement, but sole supplier
808	S&K Electronics	1664004-809	COUPLER,MUX BUS	KAI	FA50	Non-agreement, but sole supplier
809	S&K Electronics	1664004-811	COUPLER,MUX BUS	KAI	FA50	Non-agreement, but sole supplier
810	SENSOR SYSTEMS, LLC	MODEL 78	VR-ROTARY	HANWHA	NVIS	Non-agreement, but sole supplier
811	SYNERGY MICROWAVE	CLP-401	FREQ-MIXER	HAHWA	KSAM OVERHAUL	Non-agreement, but sole supplier
812	SYNERGY MICROWAVE	CMF-A21	FREQ-MIXER	HAHWA	BIHO	Non-agreement, but sole supplier
813	TPA MOTION, LLC	AP08S1B3F45A-44	PINION	HAHWA	HSC MASS	Non-agreement, but sole supplier
814	TPA MOTION, LLC	F08S1B5-F6A-132	GEAR	HAHWA	KSAM	Non-agreement, but sole supplier
815	TPA MOTION, LLC	RCS A10-3-3	TOOLS	HAHWA	30MM Anti-Aircraft Gun	Non-agreement, but sole supplier
816	TPA MOTION, LLC	RCS A8-3-3	COUPLING	HAHWA	AVS-01K	Non-agreement, but sole supplier
817	TOP MICROWAVE	TM830T08	VCO EPOXY	HAHWA	PEGASUS	Non-agreement, but sole supplier
818	TRISTAR INC	73820-X0778-A4109	SEAL-ROTARY SEAL	HAHWA	PKG-B B2	Non-agreement, but sole supplier
819	TRISTAR INC	738-276-A4109	SEAL-ROTARY SEAL,738	HAHWA	FFX-II	Non-agreement, but sole supplier
820	TRISTAR INC	73830-X2857-A4109	SEAL-ROTARY SEAL,738	HAHWA	PKG-B B2	Non-agreement, but sole supplier
821	SURMET CORP.	R003378	SPINEL LENS	HANWHA	TGP	Non-agreement, but sole supplier
822	ADEX AEROSPACE, LLC	360PS01B1A	Switch, Push Button	CAPI	KT-1	Non-agreement, but sole supplier
823	ADEX AEROSPACE, LLC	3E9208A	AZ RESOLVER ASSY	HANWHA	K1,K1A1	Non-agreement, but sole supplier
824	ADEX AEROSPACE, LLC	3E9209A	EL RESOLVER ASSY	HANWHA	K1,K1A1	Non-agreement, but sole supplier
825	ADEX AEROSPACE, LLC	8G3-200A	EL TORQUE MOTOR ASSY	HANWHA	K1	Non-agreement, but sole supplier
826	ADEX AEROSPACE, LLC	8G5200A	MOTOR ASSY, AZ TORQU	HANWHA	K1	Non-agreement, but sole supplier
827	Phytron, Inc	SGA-145107	GEARED STEP MOTOR FO	HANWHA	SATELLITE	Non-agreement, but sole supplier
828	Phytron, Inc	V55 33.200.0.6-CR GPL 32/100.1	MOTOR GEARED-STEPPER	HANWHA	SAT7	Non-agreement, but sole supplier
829	Phytron, Inc	V55 33.200.0.6-CR VGPL32/100-FM AIRTE	MOTOR GEARED-STEPPER	HANWHA	SAT7A	Non-agreement, but sole supplier
830	AIR ROVER	04-1077	POWER CORD	SEGI	MUAV	Non-agreement, but sole supplier
831	AIR ROVER	11-1094	CONNECTOR, DUCT, 8"	SEGI	SAUDI EXPORT	Non-agreement, but sole supplier
832	AIR ROVER	13-1354	VFD, 230VAC, 3-PHASE	SEGI	MUAV	Non-agreement, but sole supplier
833	AIR ROVER	40DT08HD	HOSE KIT	SEGI	MUAV	Non-agreement, but sole supplier
834	AIR ROVER	78-0027	ELEMENT, PRIMARY AIR	SEGI	MUAV	Non-agreement, but sole supplier

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No	Name	Item	Description	CUSTOMER	Program	Category
835	AIR ROVER	78-0041	CARTRIDGE, OIL FILTE	SEGI	MUAV	Non-agreement, but sole supplier
836	AIR ROVER	78-0042	FUEL FILTER	SEGI	MUAV	Non-agreement, but sole supplier
837	AIR ROVER	78-0047	CARTRIDGE, FUEL FILT	SEGI	MUAV	Non-agreement, but sole supplier
838	AIR ROVER	FL60BA25	COOLING SYSTEM	SEGI	MUAV	Non-agreement, but sole supplier
839	AIR ROVER	FL36BA25-AI	COOLING SYSTEM	SEGI	DUAV	Non-agreement, but sole supplier
840	AIR ROVER	SPKLICR36CA105F	SPARE PARTS KIT FOR THE (R)JULCR36CA	SEGI	SAUDI EXPORT	Non-agreement, but sole supplier
841	AIR ROVER	RULHT120CA	COOLING SYSTEM	SEGI	DUAV	Non-agreement, but sole supplier
842	AIR ROVER	RULCR120CA	COOLING SYSTEM	SEGI	DUAV	Non-agreement, but sole supplier

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**1 APPENDIX 2 – MASTER LIST OF SUPPLIERS**

No	Company Name	Address
1	Hanwha Systems Co.,Ltd	244, 1Gongdan-ro, Gumi, Gyungsangbuk-do, Korea
2	Sea Electronics Co.,Ltd	513-15 Sangdaewon-dong, Jungwon-gu, Seongnam-si,Gyeonggi-do, Korea
3	Hanwha International LLC	300 Frank W Burr Blvd #52, Teaneck, NJ 07666
4	Seoul Standard Co. Ltd	Acehighend Tower 9th 3/4 Floor, 233, Gasandigital 1ro, Geumcheongu, Seoul, Korea
5	SNT Motiv Co., Ltd	363, Yeoraksongjeong-ro, Cheolma-myeon, Gijang-gun, Busan, Korea
6	Intellics Co., Ltd	#A-309 Bundang Techno Park A, 150 YatapDong, BundangGu, SungnamShi Gyeonggi-do, Korea
7	3R Co., Ltd	#103, 6-20, Dongtanchidongcheon-ro 4-gil, Hwaseong-si, Gyeonggi-do, Korea
8	Unione Tech Corp.	R806 ISbiztower 57-2, Heungan-daero 427Beon-gil, Dongan-gu, Anyang-si Gyeonggi-do, Korea
9	Korea Electro-Optics Co., Ltd	36, Seounsandan-ro 2-gil, Gyeyang-gu, Incheon, Korea
10	Century Corporation	70, Bucheon-ro 208beon-gil, Bucheon-si, Gyeonggi-do, Korea
11	Qnion Co., Ltd.	165, Jukdong-ro, Yuseong-gu, Daejeon-si, Korea
12	Data Device Corporation	105 Wilbur Place, Bohemia, NY 11716
13	Arrow Electronics, Inc.	155 Chain Lake Dr., Suite 27, Halifax, NS B3S 1B3 Canada
14	Avnet Electronics Marketing	102 Motor Parkway, Suite 420, Hauppauge, NY 11788
15	TTI, Inc.	Po Drawer 99111, Fort Worth, TX 76199-0111
16	Communications & Power Industries	150 Sohier Way, Beverly, MA 01915
17	Beta Transformer Technology Corp.	40 Orville Drive, Bohemia, NY 11716-2529
18	Kemet Electronics Corp.	2835 Kemet Way, Simpsonville, SC 29681
19	Northrop Grumman Synoptics	1201 Continental Blvd., Charlotte, NC 28273
20	Powell Electronics	200 Commodore Drive, Logan Township, NJ 08085
21	Diamond Antenna and Microwave Co.	59 Porter Rd., Littleton, MA 01460
22	Olympic Tool & Machine Corp.	2100 Brigewater Rd., Aston, PA 19014
23	Com Dev International	Lochend Industrial Estate, Newbridge, Edinburgh Eh28 8LP UK
24	S&K Electronics,Inc.	56301 Hwy.93 S., Ronan, MT 59864
25	Adex Aerospace, LLC	12540 Lylan Ridge St., Las Vegas, NV 89138
26	Caph Micro Inc.	152-46, Oegukgieop-Ro, Sanam-Myeon Sacheon-Si Gyeongsangnam-Do 52530 Korea
27	Electro Enterprises	3601 N I-35 Service Road, Oklahoma City, OK 73136
28	Vpt, Inc.	1971 Kraft Drive, Suite 1000, Blacksburg, VA 24060
29	Flame Enterprises Inc.	8430 Spires Way, Suite K, Frederick, MD 21701
30	Arbor Electronics,Inc.	821 Kiowa Drive West, Lake Kiowa, TX 76240
31	Wire Masters Inc.	1788 Northpointe Rd., Columbia, TN 38401
32	L&T Technology Services Limited	2035 Lincoln Highway, Edison, NJ 08817
33	Glenair, Inc.	1211 Air Way, Glendale, CA 91201



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34	Natel Engineering, Co.	9340 Owensmouth Ave, Chatsworth, CA 91311
35	New Yorker Electronics	209 Industries Pkwy, Northvale, NJ 76447
36	Steadfast Technologies LLP	109 Bukit Purmei Road, Bukit Purmei Ville 90109 Singapore
37	Tri-Tech Metals Inc.	9039 Charles Smith Ave., Rancho Cucamonga, CA 91730
38	PEI-Genesis	2180 Hornig Road, Philadelphia, PA 19116-4289
39	Amphenol Corporation	40-60 Delaware Avenue, Sidney, NY 13838
40	Naeco Pty Ltd.	5 Hook Street, Capalaba, Qld 4157 Australia
41	Kaman Precision Products, A Division of Kaman Aero	217 Smith Street, Middletown, CT 06457
42	Peerless Electronics Inc.	85 Adams Avenue, Hauppauge, NY 11788
43	Marine Air Supply Company Inc.	5330 Spectrum Drive, Frederick, MD 21703
44	BTC Electronic Components	2709 Connector Drive, Wake Forest, NC 27587
45	Charcroft Electronics	Dol-Y-Coed, Llanwrtyd Wells, Powys LD5 4TH UK
46	Parker Hannifin Corporation Chomerics Division	77 Dragon Court, Woburn, MA 01888
47	March Electronics, Inc.	25 Feldland St., Bohemia, NY 11716
48	Moog Components Group Inc.	Blacksburg Operations, Blacksburg, VA 24060
49	Phytron, Inc.	600 Blair Park Road, Suite 220, Williston, VT 05495
50	Dynamic Sealing Technologies Inc.	13829 Jay Street NW, Andover, MN 55304
51	Scheerer Bearing Corporation	645 Davisville Road, Willow Grove, PA 19090
52	Satinox Assemblage	2, Rue Des Cotes D'Orval 78550 Houdan, France
53	Mission Systec Inc.	230 Pangyoyeok-Ro Suite 906 Bundang-Gu Seongnam-Si Gyeonggi 463-400 Korea
54	Axon Cable Inc.	1316 N. Plum Grove Road, Schaumburg, IL 60173
55	Heilind Electronics	100 South Turnpike Road, Wallingford, CT 06492
56	Vicor Corporation	25 Frontage Rd., Andover, MA 01810
57	Get Semiconductor	2121 Ringwood Ave., San Jose, CA 95131
58	Novanta Corporation	125 Middlesex Turnpike, Bedford, MA 01730
59	B.E. Meyers & Co., Inc.	9461 Willows Rd NE, Redmond, WA 98052
60	Spacecraft Components	3040 N.Clayton St. North, Las Vegas, NV 89032
61	Connective Design Inc.	3010 South Tech. Blvd., Miamisburg, OH 45342
62	Air Rover Inc.	12679 FM 3311, Tyler, TX 75708
63	Aperture Optical Science Inc.	170 Pondview Drive, Meriden, CT 06450
64	Able Electronics	18 Sawgrass Dr, Bellport, NY 11713
65	DataPro International Inc.	933 NW 49th St. Seattle, WA 98107
66	Wesco Aircraft Hardware Corp., dba Incora	2601 Meacham Blvd Suite 400 Fort Worth, TX 76137
67	Robert McKeown Company, Inc.	111 Chambers Brook Road, Branchburg, NJ 08876
68	Kehuite Technology Development Ltd.	RM 9A A Center Zhenye Building Baoan South RD.LuoHu SZ China
69	Hi-Hone Enterprises Limited	21st Fl, Suite A, City Square, Jiabin Road, Luoku, Shenzhen China

**Robert Ayers, Project Manager, Norris Associates Technologies, LLC**



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1 **APPENDIX 3 – LIST OF ITEMS IN RANDOMIZED ORDER**

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Line Number	Item Number	Category Total = 358	Name	Item	Description	Customer	P
1	1	<b>HARD</b>	Scheerer Bearing	10189/1060	Bearing	HANWHA	M
2	2	<b>HARD</b>	Scheerer Bearing	13189/1060	Bearing	HANWHA	M
3	182	<b>HARD</b>	Data Device Corporation	28LV010RPFI-20	IC	HANWHA	H
4	188	<b>EASY</b>	Data Device Corporation	BU-61743G3-290	IC-BUS CONTROLLER;-	HANWHA	L
5	203	<b>EASY</b>	Data Device Corporation	DSC-11524-204	IC	HANWHA	S
6	235	<b>HARD</b>	Beta Transformer	DB12005	DATA BUS COUPLER	KAI	K
7	271	<b>UNDETERMINED</b>	MESL MICROWAVE	10C 10416	S-BAND HALF HEIGHT W	HANWHA	S
8	283	<b>MEDIUM</b>	VPT	5962R1221901HXC	IC, DCDC CONVERTOR ,	KAI	S
9	288	<b>EASY</b>	VPT	DVHF283R3S	CONVERTER-DC/DC	HANWHA	T
10	302	<b>EASY</b>	VPT	VPTF10-28	FILTER	HANWHA	T
11	305	<b>EASY</b>	KNT ENGINEERING	ANV-126A	NIGHT VISION DEVICE	HANWHA	A
12	306	<b>EASY</b>	KNT ENGINEERING	ANV-126A-001	NIGHT VISION DEVICE	HANWHA	A
13	331	<b>EASY</b>	DIAMOND MICROWAVE	18-2124-0	ROTARY JOINT	EMWAVE	2
14	357	<b>MEDIUM</b>	STEADFAST	520200105	TRANSISTOR	KAI	S
15	361	<b>HARD</b>	STEADFAST	2N5153RESYHRG	TRANS GP BJT PNP 80V	SATREC	C
16	362	<b>HARD</b>	STEADFAST	2N5153RESYHRT	TRANS GP BJT PNP 80V	SATREC	C
17	372	<b>EASY</b>	STEADFAST	5962F0252401VXC	IC	KAI	S
18	766	<b>EASY</b>	AGM CONTAINER CONTROLS, I	10BR12A16	SILICAGEL	HANWHA	T

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19	389	MEDIUM	STEADFAST	920204602(HCC4050BKT)	IC	KAI	S
20	830	HARD	AIR ROVER	04-1077	POWER CORD	SEGI	M
21	189	EASY	Data Device Corporation	BU-61860B3-202	IC	HANWHA	S
22	254	UNDETERMINED	Beta Transformer	NH17147-4-090	COUPLER ASSY	KAI	K
23	546	LIKELY	TRI-TECH METALS INC.	DD25278510000B0	MIL-S-46850 GR300 D4	Not under eleven customer	
24	387	HARD	STEADFAST	920112002F	MICROCIRCUIT, QUAD 2	KAI	C
25	443	LIKELY	TRI-TECH METALS INC.	0.250X4X0.250	ASTM D5989 0.250X4X0	Not under eleven customer	
26	234	UNDETERMINED	Beta Transformer	BXK-2	BOARD-SERIAL INTERFA	HANWHA	H
27	547	LIKELY	TRI-TECH METALS INC.	DD25278520000B0	BAR, AISI 1144,U D30	Not under eleven customer	
28	499	LIKELY	TRI-TECH METALS INC.	AMS-QQ-S-763, STS304-B/Ø0.39 X 78.74I	AMS-QQ-S-763, STS304	Not under eleven customer	
29	406	EASY	STEADFAST	JANSR2N2222AUB	TR, NPN, GENERAL, 50	KAI	C
30	468	LIKELY	TRI-TECH METALS INC.	AMS 4050,A7050-T7451,0.99X9.06X13.39	AMS 4050,A7050-T7451	Not under eleven customer	
31	747	LIKELY	TRI-TECH METALS INC.	QQ-A-250/4,2024-T3	SHEET,AL(.063" x 48"	Not under eleven customer	
32	241	UNDETERMINED	Beta Transformer	MLP-2216-HREL	TRANSFORMER	KARI	K
33	319	UNDETERMINED	BRANDYWINE	77-HSIS21701	GRATING_SWIR	HANWHA	C
34	637	LIKELY	TRI-TECH METALS INC.	DD72492300000B0	QQ-N-286,UNS N05500	Not under eleven customer	
35	597	LIKELY	TRI-TECH METALS INC.	DD25315660000B0	BAR, CDA NO.623 D25*	Not under eleven customer	
36	640	LIKELY	TRI-TECH METALS INC.	DD72492330000B0	BAR, UNS C63000 D90X	Not under eleven customer	
37	290	EASY	VPT	DVMA28	FILTER	HANWHA	F
38	599	LIKELY	TRI-TECH METALS INC.	DD25319960000B0	BAR, CDA NO.623 D40*	Not under eleven customer	
39	522	LIKELY	TRI-TECH METALS INC.	DD21248000030B0	BAR UNS G10700 D15.9	Not under eleven customer	
40	613	LIKELY	TRI-TECH METALS INC.	DD25937844030B0	BAR, UNS S17400 D15X	Not under eleven customer	
41	429	EASY	STEADFAST	RHFLVDS32AK01V	QUAD LVDS RX	I3	
42	15	EASY	DOWKEY MICROWAVE	401-220832A	SPDT	Not under eleven customer	



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43	618	LIKELY	TRI-TECH METALS INC.	DD28599380000B0	BAR, CDA NO.624 D70*	Not under eleven cus- tomer	
44	106	HARD	DOWKEY MICROWAVE	441J-420803A	SW,4MPT-L-12-SMA-TTL	Not under eleven cus- tomer	
45	528	LIKELY	TRI-TECH METALS INC.	DD21248000090B0	BAR UNS G10700 D28.6	Not under eleven cus- tomer	
46	646	LIKELY	TRI-TECH METALS INC.	DD72492530000B0	AMS 3670/3 D60X55, B	Not under eleven cus- tomer	
47	823		ADEX AEROSPACE, LLC	3E9208A	AZ RESOLVER ASSY	HANWHA	K
48	730	LIKELY	TRI-TECH METALS INC.	MIL-S-5059STAINLESS STEEL304/2.25X3.54	MIL-S-5059STAINLESS	Not under eleven cus- tomer	
49	163		DOWKEY MICROWAVE	565J-520802A	RF Switch	Not under eleven cus- tomer	
50	655	LIKELY	TRI-TECH METALS INC.	DD72493870000B0	AMS5643 UNS S17400 D	Not under eleven cus- tomer	
51	122		DOWKEY MICROWAVE	521U-220833L-1	RF-Switch	Not under eleven cus- tomer	
52	763	LIKELY	TRI-TECH METALS INC.	TI-6AL-4V_GR5_0.875X19.70	TI-6AL-4V GR5 Ø.79X1	Not under eleven cus- tomer	
53	523	LIKELY	TRI-TECH METALS INC.	DD21248000040B0	BAR, UNS G10700 D15.	Not under eleven cus- tomer	
54	698	LIKELY	TRI-TECH METALS INC.	EN AW-6082, T6/T651/T0.31IN X 0.63IN X	EN AW-6082, T6/T651/	Not under eleven cus- tomer	
55	609	LIKELY	TRI-TECH METALS INC.	DD25937842010B0	BAR UNS S17400 D15X3	Not under eleven cus- tomer	
56	113		DOWKEY MICROWAVE	521-220833L	RF Switch	Not under eleven cus- tomer	
57	554	LIKELY	TRI-TECH METALS INC.	DD25279800000B0	BAR, AISI 4150 UNS G	Not under eleven cus- tomer	
58	253		Beta Transformer	NH17147-3-130	COUPLER	KAI	K
59	780		COMPUTER CONVERSIONS COR	MRDC7540-3	IC-A/D CONVERTER,R/D	HANWHA	K
60	629	LIKELY	TRI-TECH METALS INC.	DD55969290000B0	17-4PH,UNS S17400,D4	Not under eleven cus- tomer	
61	272		MESL MICROWAVE	10U 10413	S-BAND HALF HEIGHT W	HANWHA	S
62	55		DOWKEY MICROWAVE	401T-7208	SW, MS-PL-12-SMA-TP-	Not under eleven cus- tomer	
63	702	LIKELY	TRI-TECH METALS INC.	FA84409685-003	ASTM B777-15, CLASS	Not under eleven cus- tomer	
64	32		DOWKEY MICROWAVE	401-430832	RF Switch	Not under eleven cus- tomer	
65	213		Data Device Corporation	SD14621DS-205	IC-A/D CONVERTER	HANWHA	T V
66	562	LIKELY	TRI-TECH METALS INC.	DD25283950000B0	BAR, UNS C17200 D25X	Not under eleven cus- tomer	

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67	310		KNT ENGINEERING	NV-4AM	FLASHLIGHT FILTER #2	HANWHA	N
68	500	LIKELY	TRI-TECH METALS INC.	AMS-QQ-S-763/CLASS 304/Ø0.63X37.41	AMS-QQ-S-763/CLASS 3	Not under eleven cus- tomer	
69	208		Data Device Corporation	OSC-15801-200	I.C	HANWHA	L
70	13		DOWKEY MICROWAVE	401-220802A	RF Switch	Not under eleven cus- tomer	
71	751	LIKELY	TRI-TECH METALS INC.	SR3353P00302	SHEET, MIL-S-13281,C	Not under eleven cus- tomer	
72	313		APERTURE OPTICAL SCIENCE	8U5S4421	SECONDARY MIRROR	HANWHA	M
73	6		Coil Winding	CWS-1SN-11905	Coil	HANWHA	S
74	343		DIAMOND MICROWAVE	Q34501_TF	Test Fixtures	EMWAVE	
75	390		STEADFAST	920302301(HCC4013BKG)	K7 FM IC, DUAL D-FLI	KAI	S
76	762	LIKELY	TRI-TECH METALS INC.	TI6AL-4V T1.25 X 2.25 X 2.50	TI6AL-4V T1.25' X 2.	Not under eleven cus- tomer	
77	521	LIKELY	TRI-TECH METALS INC.	DD21248000020B0	BAR UNS G10700 D15.9	Not under eleven cus- tomer	
78	151		DOWKEY MICROWAVE	545J-530802A-ROHS	RF Switch	Not under eleven cus- tomer	
79	124		DOWKEY MICROWAVE	521Y-221103A	RF-Switch	Not under eleven cus- tomer	
80	643	LIKELY	TRI-TECH METALS INC.	DD72492450000B0	AMS 3670/3 D60X70, B	Not under eleven cus- tomer	
81	636	LIKELY	TRI-TECH METALS INC.	DD72492170000B0	BAR UNS S17400 D20X1	Not under eleven cus- tomer	
82	371		STEADFAST	5962F0252401VXA(RHFL4913KPA-02V)	IC	KAI	S
83	71		DOWKEY MICROWAVE	403-220802A	RELAY-POWER	Not under eleven cus- tomer	
84	160		DOWKEY MICROWAVE	565-530802A	RF-Switch	Not under eleven cus- tomer	
85	695	LIKELY	TRI-TECH METALS INC.	DIA3/8X 0.393	ASTM D5989 DIA3/8X 0	Not under eleven cus- tomer	
86	490	LIKELY	TRI-TECH METALS INC.	AMS-5643/H900, 17-4PH/Ø0.47 X 59.06IN	AMS-5643/H900, 17-4P	Not under eleven cus- tomer	
87	673	LIKELY	TRI-TECH METALS INC.	DD73169700200B0	BAR, SUM41, D160X30	Not under eleven cus- tomer	
88	57		DOWKEY MICROWAVE	401Y-2211	DC-40GHz, SPDT Switch	Not under eleven cus- tomer	
89	611	LIKELY	TRI-TECH METALS INC.	DD25937843130B0	BAR UNS S17400 D15X6	Not under eleven cus- tomer	
90	445	LIKELY	TRI-TECH METALS INC.	0.500X1.125X12.375	ASTM D5989 0.500X1.1	Not under eleven cus- tomer	

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91	542	LIKELY	TRI-TECH METALS INC.	DD25277220000B0	BAR SUM43 D80*L50	Not under eleven cus- tomer	
92	818		TRISTAR INC	73820-X0778-A4109	SEAL-ROTARY SEAL	HAHWHA	F
93	107		DOWKEY MICROWAVE	441L-420822A	RF-Switch	Not under eleven cus- tomer	
94	159		DOWKEY MICROWAVE	565-5308	RF Switch	Not under eleven cus- tomer	
95	311		KNT ENGINEERING	NVG-102B	INSPECTION SCOPE	HANWHA	M
96	812		SYNERGY MICROWAVE	CMF-A21	FREQ-MIXER	HAHWHA	E
97	278		MESL MICROWAVE	22C11103	WR28 ISOLTOR	HANWHA	K
98	426		STEADFAST	RHFLVDS2281K1	IC	I3	
99	190		Data Device Corporation	BU-62864G3-290	IC-BUS CONTROLLER	HANWHA	K
100	90		DOWKEY MICROWAVE	412-153	RF-Switch	Not under eleven cus- tomer	
101	593	LIKELY	TRI-TECH METALS INC.	DD25313480000B0	MONEL 500 (D31.8*450	Not under eleven cus- tomer	
102	176		DOWKEY MICROWAVE	CB-3U18S-10X10-ENET	10X10 CROSSBAR RF MA	Not under eleven cus- tomer	
103	353		NAECO	LSMF30120-BOTTOM	Cold Plate	HANWHA	L
104	324		DIAMOND MICROWAVE	10-2621-0_WAR	ONE YEAR EXTENDED WA	EMWAVE	C
105	580	LIKELY	TRI-TECH METALS INC.	DD25310570000B0	BAR, UNS C62400 D60*	Not under eleven cus- tomer	
106	617	LIKELY	TRI-TECH METALS INC.	DD26354000000B0	BAR, LINK, QQ-S-624 F	Not under eleven cus- tomer	
107	651	LIKELY	TRI-TECH METALS INC.	DD72493290000P0	PLATE, UNS K11510 (T	Not under eleven cus- tomer	
108	358		STEADFAST	520301006	TRANSISTOR	KAI	S
109	418		STEADFAST	RHFACT138K01V	3 TO 8 DECODER	I3	
110	793		FIRST SENSOR INC.	50131305	DIODE-LASER	HANWHA	S
111	662	LIKELY	TRI-TECH METALS INC.	DD72495170000B0	AMS 6527(AF1410) D50	Not under eleven cus- tomer	
112	666	LIKELY	TRI-TECH METALS INC.	DD72512500000B0	BAR, UNS C63000,D50X	Not under eleven cus- tomer	
113	86		DOWKEY MICROWAVE	411CJ-380832	RF Switch	Not under eleven cus- tomer	
114	246		Beta Transformer	NH17109-6	COUPLER	KAI	K
115	725	LIKELY	TRI-TECH METALS INC.	FA84410634-003	AMS-QQ-S-763, STS316	Not under eleven cus- tomer	

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116	794		TELEDYNE JUDSON TECHNOLO	J10D-J508-R04M-60	SENSOR-INSB DETECTOR	HANWHA	H
117	187		Data Device Corporation	BU-61581S1-110	IC	HANWHA	K
118	706	LIKELY	TRI-TECH METALS INC.	FA84409824-003-2	AMS-5519-301/T0.004X	Not under eleven cus- tomer	
119	508	LIKELY	TRI-TECH METALS INC.	ASTM B36/.009X20.0X30.0	CARTRIDGE BRASS ALY	Not under eleven cus- tomer	
120	322		BRANDYWINE	VNIR_WITNESS	WITNESS SAMPLE	HANWHA	G
121	467	LIKELY	TRI-TECH METALS INC.	AL COLD PLATE CP15G05	ALUMINUM COLD PLATE	Not under eleven cus- tomer	
122	245		Beta Transformer	NH17109-5	COUPLER	KAI	K
123	205		Data Device Corporation	DSC-11524-304	I.C	HANWHA	K
124	351		Polarity	IKASK1303	MPA	HANWHA	S
125	198		Data Device Corporation	BU-64843T8-E02	IC	3R	L
126	705	LIKELY	TRI-TECH METALS INC.	FA84409824-003	AMS_5513_STS304CSP-A	Not under eleven cus- tomer	
127	359		STEADFAST	520700212	TRANSISTOR	KAI	S
128	647	LIKELY	TRI-TECH METALS INC.	DD72492540000B0	BAR, ASTM B777CL11,M	Not under eleven cus- tomer	
129	598	LIKELY	TRI-TECH METALS INC.	DD25316810000B0	UNS C62400 D30*10, B	Not under eleven cus- tomer	
130	236		Beta Transformer	DB20010	BUS COUPLER	KAI	S
131	621	LIKELY	TRI-TECH METALS INC.	DD28602100000B0	QQ-N-286 D31.8*265,	Not under eleven cus- tomer	
132	760	LIKELY	TRI-TECH METALS INC.	STAINLESS BAR 15-5 CRES CONDTN A Ø2	STAINLESS BAR 15-5 C	Not under eleven cus- tomer	
133	215		Data Device Corporation	SD-14623DX-104	IC-CONTROLLER	HANWHA	T
134	30		DOWKEY MICROWAVE	401-4308	RF-Switch	Not under eleven cus- tomer	
135	531	LIKELY	TRI-TECH METALS INC.	DD21248000120B0	UNS G10700 D44.5*10.	Not under eleven cus- tomer	
136	267		Beta Transformer	TST-9002	TRANS PULSE	HANWHA	K
137	381		STEADFAST	5962F8766303VXC	MICROCIRCUIT, OCTAL	KAI	G
138	375		STEADFAST	5962F8755201VXA	IC	KAI	S
139	721	LIKELY	TRI-TECH METALS INC.	FA84409936-003	ASTM_B777-15_CLASS_2	Not under eleven cus- tomer	
140	526	LIKELY	TRI-TECH METALS INC.	DD21248000070B0	UNS G10700 D28.6X8.0	Not under eleven cus- tomer	



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141	308		KNT ENGINEERING	NGRS-15401	SHUTTERED EYEGUARD	HANWHA	M
142	257		Beta Transformer	NH17147-4-150-90	COUPLER ASSY	KAI	K
143	795		TELEDYNE JUDSON TECHNOLO	J10D-J508-R04M-60-SP28	SENSOR-INSB DETECTOR	HANWHA	H
144	14		DOWKEY MICROWAVE	401-220802A-ROHS	RF-Switch	Not under eleven cus- tomer	
145	166		DOWKEY MICROWAVE	581-420822	SP8T, RF Switch	Not under eleven cus- tomer	
146	539	LIKELY	TRI-TECH METALS INC.	DD25277190000B0	BAR, SUM43 D90*L40	Not under eleven cus- tomer	
147	719	LIKELY	TRI-TECH METALS INC.	FA84409934-003	ASTM_B777-15_CLASS_2	Not under eleven cus- tomer	
148	433		STEADFAST	RHR801K01V	COMPARATOR	SATREC	
149	842		AIR ROVER	RULCR120CA	COOLING SYSTEM	SEGI	D
150	175		DOWKEY MICROWAVE	CANCELLATION_FEE	521U-220802A Cancel	Not under eleven cus- tomer	
151	501	LIKELY	TRI-TECH METALS INC.	AMS-QQ-S763/SUS 304/Φ3.35X0.67	AMS-QQ-S763/SUS 304/	Not under eleven cus- tomer	
152	827		Phytron, Inc	SGA-145107	GEARED STEP MOTOR FO	HANWHA	S
153	742	LIKELY	TRI-TECH METALS INC.	N2121012	BAR, AMS-QQ-S-763, S	Not under eleven cus- tomer	
154	136		DOWKEY MICROWAVE	535T-520822A	RF Switch	Not under eleven cus- tomer	
155	650	LIKELY	TRI-TECH METALS INC.	DD72493280000P0	PLATE, UNS K11510 (T	Not under eleven cus- tomer	
156	204		Data Device Corporation	DSC-11524-204Z	IC	HANWHA	K
157	219		Data Device Corporation	SDC-14615T-104	IC	HANWHA	H
158	488	LIKELY	TRI-TECH METALS INC.	AMS5519 301 FULL HARD,SHEET/0.004/23	AMS5519 301 FULL HAR	Not under eleven cus- tomer	
159	658	LIKELY	TRI-TECH METALS INC.	DD72494850000B0	AMS 6308 UNS K71040	Not under eleven cus- tomer	
160	379		STEADFAST	5962F8762401VXA(RHFAC14K02V)	IC	KAI	S
161	321		BRANDYWINE	VNIR_ENGINEERING	ENGINEERING GRADE	HANWHA	G
162	142		DOWKEY MICROWAVE	545-520802A	RF Switch	Not under eleven cus- tomer	
163	34		DOWKEY MICROWAVE	401-490802A	RF Switch	Not under eleven cus- tomer	
164	606	LIKELY	TRI-TECH METALS INC.	DD25452740000B0	BAR, UNS G41500 D88.	Not under eleven cus- tomer	
165	746	LIKELY	TRI-TECH METALS INC.	QQ-A-250/13/ALCLAD/7075/T6/0.04X48X4	QQ-A-250/13/ALCLAD/7	Not under eleven cus- tomer	

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166	448	LIKELY	TRI-TECH METALS INC.	0.750X0.750X0.4375	ASTM D5989 0.750X0.7	Not under eleven cus- tomer	
167	133		DOWKEY MICROWAVE	535C-520822A	RF-Switch	Not under eleven cus- tomer	
168	699	LIKELY	TRI-TECH METALS INC.	EN AW-6082, T6/T651/T0.39IN X 0.59IN X	EN AW-6082, T6/T651/	Not under eleven cus- tomer	
169	588	LIKELY	TRI-TECH METALS INC.	DD25313080000B0	CDA NO.624 D70*L70,	Not under eleven cus- tomer	
170	428		STEADFAST	RHFLVDS31AK1	IC-LINE DRIVER	HAHWHA	M
171	768		AGM CONTAINER CONTROLS, I	BLD1519	OTHER MECHA-MOISTURE	HANWHA	P
172	112		DOWKEY MICROWAVE	521-220832L	RF Switch	Not under eleven cus- tomer	
173	482	LIKELY	TRI-TECH METALS INC.	AMS4027 A6061-T6/0.16TX3.35X8.67	AMS4027 A6061-T6/0.1	Not under eleven cus- tomer	
174	309		KNT ENGINEERING	NGRS-21100	SHUTTERED EYEGUARD	HANWHA	M
175	450	LIKELY	TRI-TECH METALS INC.	1.00X1.25X0.250	ASTM D5989 1.00X1.25	Not under eleven cus- tomer	
176	449	LIKELY	TRI-TECH METALS INC.	0.875X0.875X0.4375	ASTM D5989 0.875X0.8	Not under eleven cus- tomer	
177	228		Beta Transformer	264A608-1	COUPLER	KAI	E
178	347		DIAMOND MICROWAVE	QTP	QUALIFICATION TEST P	EMWAVE	
179	255		Beta Transformer	NH17147-4-105	COUPLER ASSY	KAI	K
180	720	LIKELY	TRI-TECH METALS INC.	FA84409935-003	ASTM_B777-15_CLASS_2	Not under eleven cus- tomer	
181	645	LIKELY	TRI-TECH METALS INC.	DD72492520000B0	AMS 3670/3 D50X55, B	Not under eleven cus- tomer	
182	642	LIKELY	TRI-TECH METALS INC.	DD72492350000B0	UNS C63000 D110X350,	Not under eleven cus- tomer	
183	118		DOWKEY MICROWAVE	521-480833A	RF-Switch	Not under eleven cus- tomer	
184	816		TPA MOTION, LLC	RCS A8-3-3	COUPLING	HAHWHA	A
185	294		VPT	DVSA2812S	Converter	HANWHA	A
186	56		DOWKEY MICROWAVE	401U-220832L-1	RF-Switch	Not under eleven cus- tomer	
187	339		DIAMOND MICROWAVE	Q34501_NRE	Q34501 Non-Recurring	EMWAVE	
188	682	LIKELY	TRI-TECH METALS INC.	DD99000880000B0	GEAR-1-SPUR-INTERNAL	Not under eleven cus- tomer	
189	489	LIKELY	TRI-TECH METALS INC.	AMS5629/SUS H1025,PH13-8MO/Φ3.35X0	AMS5629/SUS H1025,PH	Not under eleven cus- tomer	
190	199		Data Device Corporation	BU-65863H8-E02	IC	HANWHA	L

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191	39		DOWKEY MICROWAVE	401A-4208	SW,PMS-L-12-SMA	Not under eleven cus- tomer	
192	131		DOWKEY MICROWAVE	535-530822	RF-Switch	Not under eleven cus- tomer	
193	641	LIKELY	TRI-TECH METALS INC.	DD72492340000B0	BAR, UNS C63000 D100	Not under eleven cus- tomer	
194	749	LIKELY	TRI-TECH METALS INC.	RW-175-3/64-X-STK	TUBE-SHRINKAGE	Not under eleven cus- tomer	
195	4		Cambridge	6M848	Mirror	HANWHA	M
196	243		Beta Transformer	NH17109-2	COUPLER	KAI	K
197	726	LIKELY	TRI-TECH METALS INC.	FA84413009-003	AMS-QQ-S-763, STS304	Not under eleven cus- tomer	
198	718	LIKELY	TRI-TECH METALS INC.	FA84409933-003	ASTM_B777-15_CLASS_2	Not under eleven cus- tomer	
199	582	LIKELY	TRI-TECH METALS INC.	DD25312330000B0	AISI4150 D50*L450, B	Not under eleven cus- tomer	
200	287		VPT	DVHF2812S	CONVERTER-DC/DC	HANWHA	K
201	340		DIAMOND MICROWAVE	Q34501_PM	Program Management	EMWAVE	
202	89		DOWKEY MICROWAVE	411CT-220832A	RF-Switch	Not under eleven cus- tomer	
203	519	LIKELY	TRI-TECH METALS INC.	DD15502900000B	ASTM A322 G41500 D50	Not under eleven cus- tomer	
204	149		DOWKEY MICROWAVE	545J-520802A	RF-Switch	Not under eleven cus- tomer	
205	679	LIKELY	TRI-TECH METALS INC.	DD99000780000B0	BAR,DISK,SPLINED, SU	Not under eleven cus- tomer	
206	553	LIKELY	TRI-TECH METALS INC.	DD25279760000B0	ASTM A311,UN D80*L35	Not under eleven cus- tomer	
207	716	LIKELY	TRI-TECH METALS INC.	FA84409931-003	ASTM_B777-15_CLASS_2	Not under eleven cus- tomer	
208	9		Atlantic Gasket	60763549	Pad	HANWHA	K
209	544	LIKELY	TRI-TECH METALS INC.	DD25277380000B0	QQ-N-286 FORM1 D45X3	Not under eleven cus- tomer	
210	803		NORTHROP GRUMMAN SYNOP	Y5510	ND:YAG ROD	HANWHA	T K
211	327		DIAMOND MICROWAVE	116-2255-0_EIDP	END ITEM DATA PACKAG	EMWAVE	2
212	42		DOWKEY MICROWAVE	401J-2308	SW, MS-F-28-SMA-DE9P	Not under eleven cus- tomer	
213	492	LIKELY	TRI-TECH METALS INC.	AMS-QQ-A-225/9 AL_ALLOY/ROD/7075T7	AMS-QQ-A-225/9 ALUMI	Not under eleven cus- tomer	
214	447	LIKELY	TRI-TECH METALS INC.	0.500X2.188X3.00	ASTM B777-15, CLASS2	Not under eleven cus- tomer	
215	127		DOWKEY MICROWAVE	531A-480122A	RF-Switch	Not under eleven cus- tomer	

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216	121		DOWKEY MICROWAVE	521JU-420803A	RF-Switch	Not under eleven cus- tomer	
217	191		Data Device Corporation	BU-63705F2-120	IC-BUS CONTROLLER	HANWHA	H
218	270		LASER BASED MEASUREMENT	DK9CHROME240	Bore Erosion Measurement Inspection Syst	Not under eleven cus- tomer	
219	792		FIRST SENSOR INC.	50131304	DIODE-LASER-QP154-Q	HANWHA	C S
220	708	LIKELY	TRI-TECH METALS INC.	FA84409852-003	AMS_4117_A6061-T6+Ø2	Not under eleven cus- tomer	
221	84		DOWKEY MICROWAVE	411C-480832	RF Switch	Not under eleven cus- tomer	
222	238		Beta Transformer	DB40010	1553 COUPLER - 4 STU	KAI	S
223	435		STEADFAST	RHRXHR162245K1	16-BIT BIDIRECTIONAL	HAHWHA	S
224	33		DOWKEY MICROWAVE	401-480832	RF Switch	Not under eleven cus- tomer	
225	315		APERTURE OPTICAL SCIENCE	LSIC24001	M3	HANWHA	L
226	223		Beta Transformer	21049	TRANSFORMER	HANWHA	F
227	266		Beta Transformer	TLP-1205	TRANSFORMER	HANWHA	K
228	117		DOWKEY MICROWAVE	521-430833A	SWITCH	Not under eleven cus- tomer	
229	181		DOWKEY MICROWAVE	REPAIR,545J-5308	545J-5308, REPAIR	Not under eleven cus- tomer	
230	96		DOWKEY MICROWAVE	412-430132	RF Switch	Not under eleven cus- tomer	
231	712	LIKELY	TRI-TECH METALS INC.	FA84409891-003	AMS_4117_A6061-T6+Ø6	Not under eleven cus- tomer	
232	202		Data Device Corporation	DRC-644-L-1R	IC,DRC	HANWHA	E
233	416		STEADFAST	RHFAC541K01V	FAST OCTAL LINE BUFF	I3	
234	162		DOWKEY MICROWAVE	565-9208	RF-Switch	Not under eleven cus- tomer	
235	374		STEADFAST	5962F0253201VXA(RHFL7913KPA-02V)	IC	KAI	S
236	465	LIKELY	TRI-TECH METALS INC.	6061-T6 AL ALLOY/ASTM B221/1.00X7.00	6061-T6 AL ALLOY/AST	Not under eleven cus- tomer	
237	715	LIKELY	TRI-TECH METALS INC.	FA84409930-003	ASTM_B777-15_CLASS_2	Not under eleven cus- tomer	
238	529	LIKELY	TRI-TECH METALS INC.	DD21248000100B0	UNS G10700 D28.6*8.0	Not under eleven cus- tomer	
239	813		TPA MOTION, LLC	AP08S1B3F45A-44	PINION	HAHWHA	H
240	491	LIKELY	TRI-TECH METALS INC.	AMS-DTL-22499/3	SHEET,LAMINATED, CRE	Not under eleven cus- tomer	



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241	132		DOWKEY MICROWAVE	535-590802E	SWITCH, RF SP3T, OPE	Not under eleven cus- tomer	
242	460	LIKELY	TRI-TECH METALS INC.	6061-T6 AL ALLOY(ASTM B221)0.625X4.00	6061-T6 AL ALLOY(AST	Not under eleven cus- tomer	
243	802		NORTHROP GRUMMAN SYNOP	481173	Cr+4:YAG FILTER PASS	HANWHA	T K
244	440	LIKELY	TRI-TECH METALS INC.	0.02INCHX11.9INCHX15.75INCH	STAINLESS STEEL (304	Not under eleven cus- tomer	
245	608	LIKELY	TRI-TECH METALS INC.	DD25937841140B0	UNS S17400 D6X90, BA	Not under eleven cus- tomer	
246	665	LIKELY	TRI-TECH METALS INC.	DD72512490000B0	BAR, UNS C63000,D50X	Not under eleven cus- tomer	
247	230		Beta Transformer	571-18-8002	DATA BUS	HANWHA	K
248	11		DOWKEY MICROWAVE	101-2308	RF-Switch	Not under eleven cus- tomer	
249	590	LIKELY	TRI-TECH METALS INC.	DD25313450000B0	MONEL 500 (D31.8*450	Not under eleven cus- tomer	
250	348		INRAD OPTICS	2830224-1	MIRROR, HEAD, STEP 2	HANWHA	K
251	398		STEADFAST	940103802F	IC	KAI	S
252	614	LIKELY	TRI-TECH METALS INC.	DD25937844130B0	BAR UNS S17400 D15X6	Not under eleven cus- tomer	
253	688	LIKELY	TRI-TECH METALS INC.	DD99001570000B0	BAR,GEAR-1-SPUR AISI	Not under eleven cus- tomer	
254	264		Beta Transformer	T1A21046B	TRANSFORMER	HANWHA	E
255	291		VPT	DVME28	EMI FILTER	HANWHA	H
256	403		STEADFAST	HCC4051BDG	SINGLE 8-CHANNEL ANA	SATREC	
257	675	LIKELY	TRI-TECH METALS INC.	DD73336900200B0	BAR, SUM43 D50*L30	Not under eleven cus- tomer	
258	674	LIKELY	TRI-TECH METALS INC.	DD73169800500B0	BAR, SUM43 D60*L20	Not under eleven cus- tomer	
259	575	LIKELY	TRI-TECH METALS INC.	DD25310250000B0	BAR SUM43 D80*L40	Not under eleven cus- tomer	
260	541	LIKELY	TRI-TECH METALS INC.	DD25277210000B0	BAR, SUM43 D70*L30 (	Not under eleven cus- tomer	
261	457	LIKELY	TRI-TECH METALS INC.	2X2X0.25	ASTM D5989 2X2X0.250	Not under eleven cus- tomer	
262	179		DOWKEY MICROWAVE	MP-4U18S-40-ENET	Matrix	Not under eleven cus- tomer	
263	807		S&K Electronics	16E4004-807	COUPLER,MUX BUS	KAI	P
264	723	LIKELY	TRI-TECH METALS INC.	FA84410629-003	AMS-QQ-S-763, STS316	Not under eleven cus- tomer	

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265	559	LIKELY	TRI-TECH METALS INC.	DD25283170000B0	CU ALLOY NO.614 D220	Not under eleven cus- tomer	
266	810		SENSOR SYSTEMS, LLC	MODEL 78	VR-ROTARY	HANWHA	M
267	834		AIR ROVER	78-0027	ELEMENT, PRIMARY AIR	SEGI	M
268	565	LIKELY	TRI-TECH METALS INC.	DD25285340000B0	AMPCO BRONZE GR 8 D5	Not under eleven cus- tomer	
269	579	LIKELY	TRI-TECH METALS INC.	DD25310560000B0	BAR, UNS C62400 D60*	Not under eleven cus- tomer	
270	558	LIKELY	TRI-TECH METALS INC.	DD25282470000B0	AISI 4150 D80X120, B	Not under eleven cus- tomer	
271	224		Beta Transformer	32976	TRANSFORMER	HANWHA	P
272	713	LIKELY	TRI-TECH METALS INC.	FA84409901-003	AMS_4117_A6061-T6+Ø3	Not under eleven cus- tomer	
273	481	LIKELY	TRI-TECH METALS INC.	AMS4016,A5052-H32,0.08X39.4X39.4	AMS4016,A5052-H32,0.	Not under eleven cus- tomer	
274	649	LIKELY	TRI-TECH METALS INC.	DD72493120000B0	UNS N05500 D100X980,	Not under eleven cus- tomer	
275	469	LIKELY	TRI-TECH METALS INC.	AMS 4316ALCLAD7075/T7/60.08X48X48	AMS 4316ALCLAD7075/T	Not under eleven cus- tomer	
276	328		DIAMOND MICROWAVE	116-2255-0_EV	116-2255-0 Evaluatio	EMWAVE	2
277	800		SHENZHEN LONGSUN ACOUST	DR46.5H17.5-75	AUDIO-RECEIVER	HANWHA	K
278	360		STEADFAST	920302302	MICROCIRCUIT	KAI	S
279	247		Beta Transformer	NH17147-1-100	COUPLER ASSY	KAI	K
280	74		DOWKEY MICROWAVE	403Y-2211	RF Switch	Not under eleven cus- tomer	
281	517	LIKELY	TRI-TECH METALS INC.	ASTM-D-5989-NYLON(PA)/Ø0.31 X 39.37I	ASTM-D-5989-NYLON(PA	Not under eleven cus- tomer	
282	472	LIKELY	TRI-TECH METALS INC.	AMS 5519, 301 FULL HARD T0.002, 40X40	AMS 5519, 301 FULL H	Not under eleven cus- tomer	
283	192		Data Device Corporation	BU-63705F2-300	IC-BUS CONTROLLER	HANWHA	S
284	169		DOWKEY MICROWAVE	581C-520822A	RF-Switch	Not under eleven cus- tomer	
285	350		INRAD OPTICS	8U3S3072-1	40 X 40 X 38.75mm Be	CAPH	
286	727	LIKELY	TRI-TECH METALS INC.	H02(1/2 HARD)ASTM B36/0.010X1.0X1.25	CARTRIDGE BRASS ALY	Not under eleven cus- tomer	
287	734	LIKELY	TRI-TECH METALS INC.	MMS 1597075/T73511.25X7.3X7.34	MMS 1597075/T7351/1.	Not under eleven cus- tomer	
288	538	LIKELY	TRI-TECH METALS INC.	DD25277180000B0	BAR SUM43 D80*L40	Not under eleven cus- tomer	
289	383		STEADFAST	5962F8775802VXC (RHFAC245K01V)	K7 FM IC, OCTAL BUS	KAI	S

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290	484	LIKELY	TRI-TECH METALS INC.	AMS4027 ALUM_ALLOY/PLATE/6061T651X	AMS4027 ALUMINIUM_AL	Not under eleven cus- tomer	
291	664	LIKELY	TRI-TECH METALS INC.	DD72503340000B0	ASTM B21 H02 UNS C46	Not under eleven cus- tomer	
292	47		DOWKEY MICROWAVE	401T-220832	RF-Switch	Not under eleven cus- tomer	
293	600	LIKELY	TRI-TECH METALS INC.	DD25320620000B0	CDA NO.624 D45*L30,	Not under eleven cus- tomer	
294	212		Data Device Corporation	SD-14592D2-104	IC	HANWHA	P
295	125		DOWKEY MICROWAVE	521Y-421133A	RF-Switch	Not under eleven cus- tomer	
296	336		DIAMOND MICROWAVE	Q34501_EIDP	END ITEM DATA PACKAG	EMWAVE	
297	750	LIKELY	TRI-TECH METALS INC.	SR3353P00202	SHEET, MIL-S-13281,C	Not under eleven cus- tomer	
298	261		Beta Transformer	NH17183	DIODE	KAI	K
299	393		STEADFAST	920501902F	IC	KAI	S
300	635	LIKELY	TRI-TECH METALS INC.	DD62968130000B0	MIL-S-46850B GR300 D	Not under eleven cus- tomer	
301	195		Data Device Corporation	BU-63825G6-290	IC	HANWHA	S
302	28		DOWKEY MICROWAVE	401-420832A	RF-Switch	Not under eleven cus- tomer	
303	67		DOWKEY MICROWAVE	402J-330132	RF Switch	Not under eleven cus- tomer	
304	571	LIKELY	TRI-TECH METALS INC.	DD25287860000P0	CRES 17-4PH T31.8*30	Not under eleven cus- tomer	
305	430		STEADFAST	RHFLVDS32AK1	IC-LINE RECEIVER	HAHWHA	M
306	694	LIKELY	TRI-TECH METALS INC.	DD99002830000B0	DYNALLOY 602 D38*L75	Not under eleven cus- tomer	
307	616	LIKELY	TRI-TECH METALS INC.	DD25937846090B0	BAR, UNS S17400 D20X	Not under eleven cus- tomer	
308	145		DOWKEY MICROWAVE	545-530822	RF-Switch	Not under eleven cus- tomer	
309	201		Data Device Corporation	BU-67103U200L-JL0	IC,USB, 2CH 1553B &	HANWHA	K
310	140		DOWKEY MICROWAVE	541-530803	SWITCH,RF	Not under eleven cus- tomer	
311	26		DOWKEY MICROWAVE	401-420802A	RF-Switch	Not under eleven cus- tomer	
312	671	LIKELY	TRI-TECH METALS INC.	DD73144300200B0	BAR,LINK,ASDJUSTING,	Not under eleven cus- tomer	
313	16		DOWKEY MICROWAVE	401-220832L	RF Switch	Not under eleven cus- tomer	
314	837		AIR ROVER	78-0047	CARTRIDGE, FUEL FILT	SEGI	M

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315	367		STEADFAST	520101908R	TR, NPN, GENERAL, 16	KAI	S
316	397		STEADFAST	930605102F(M54HC595KT)	MICROCIRCUIT, 8BIT S	KAI	S
317	701	LIKELY	TRI-TECH METALS INC.	FA84409647-003	AMS-QQ-S-763, STS304	Not under eleven cus- tomer	
318	660	LIKELY	TRI-TECH METALS INC.	DD72494910000B0	BAR, UNS G93106 (D82	Not under eleven cus- tomer	
319	148		DOWKEY MICROWAVE	545D-530802	RF Switch	Not under eleven cus- tomer	
320	81		DOWKEY MICROWAVE	411C-3808	RF Switch	Not under eleven cus- tomer	
321	504	LIKELY	TRI-TECH METALS INC.	ASTM A582-93BAR TYPE303,UNS30300	ASTM A582-93BAR TYPE	Not under eleven cus- tomer	
322	29		DOWKEY MICROWAVE	401-420832A-ROHS	RF-Switch	Not under eleven cus- tomer	
323	709	LIKELY	TRI-TECH METALS INC.	FA84409866-003	AMS_4117_A6061-T6+Ø3	Not under eleven cus- tomer	
324	157		DOWKEY MICROWAVE	561Y-421123A-ROHS	RF-Switch	Not under eleven cus- tomer	
325	455	LIKELY	TRI-TECH METALS INC.	1MA100D06-10010	EXTRUSION	Not under eleven cus- tomer	
326	214		Data Device Corporation	SD-14621DS-205	ICRDC	HANWHA	K
327	12		DOWKEY MICROWAVE	401-2208	RF Switch	Not under eleven cus- tomer	
328	76		DOWKEY MICROWAVE	411C-230802A	RF-Switch	Not under eleven cus- tomer	
329	453	LIKELY	TRI-TECH METALS INC.	1.00X3.25X9.00	SAE AMS 3611 1.00X3.	Not under eleven cus- tomer	
330	691	LIKELY	TRI-TECH METALS INC.	DD99001660000B0	UNS G41500,D70X115,	Not under eleven cus- tomer	
331	740	LIKELY	TRI-TECH METALS INC.	MMS1597075/T73512.5X4X5.7	MMS1597075/T7351/2.5	Not under eleven cus- tomer	
332	35		DOWKEY MICROWAVE	401-490832A	RF Switch	Not under eleven cus- tomer	
333	262		Beta Transformer	NH17184	DIODE	KAI	K
334	92		DOWKEY MICROWAVE	412-230132	RF Switch	Not under eleven cus- tomer	
335	533	LIKELY	TRI-TECH METALS INC.	DD21466440000B0	BAR, ASTM UNS C62400	Not under eleven cus- tomer	
336	832		AIR ROVER	13-1354	VFD, 230VAC, 3-PHASE	SEGI	M
337	681	LIKELY	TRI-TECH METALS INC.	DD99000830000B	BAR,GEARSHAFT-1-SPUR	Not under eleven cus- tomer	
338	316		APERTURE OPTICAL SCIENCE	LSIC23001	M4	HANWHA	L



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339	248		Beta Transformer	NH17147-1-130	COUPLER	KAI	K
340	594	LIKELY	TRI-TECH METALS INC.	DD25313490000B0	UNS C62400 (D76.2*16	Not under eleven cus- tomer	
341	638	LIKELY	TRI-TECH METALS INC.	DD72492310000B0	QQ-N-286,UNS N05500	Not under eleven cus- tomer	
342	524	LIKELY	TRI-TECH METALS INC.	DD21248000050B0	UNS G10700 D15.9*6.0	Not under eleven cus- tomer	
343	496	LIKELY	TRI-TECH METALS INC.	AMS-QQ-A-250/5 2024-T81CLAD0.05X48X	AMS-QQ-A-250/5 2024-	Not under eleven cus- tomer	
344	761	LIKELY	TRI-TECH METALS INC.	STS 316L/ASTM A276-13A/1.18 Φ X 39.38	STS 316L/ASTM A276-1	Not under eleven cus- tomer	
345	172		DOWKEY MICROWAVE	5C1-490803A	RF-Switch	Not under eleven cus- tomer	
346	574	LIKELY	TRI-TECH METALS INC.	DD25310130000B0	BAR UNS G11440 D90*3	Not under eleven cus- tomer	
347	534	LIKELY	TRI-TECH METALS INC.	DD25275230000B0	A535 G93100 D180*L48	Not under eleven cus- tomer	
348	785		ITT Enidine Incorporated	WR16-400-08-EM	ISOLATOR	MMSYS	
349	382		STEADFAST	5962F8766303VXC(RHFACT245K01V)	MICROCIRCUIT, OCTAL	KAI	S
350	174		DOWKEY MICROWAVE	919C70200	RF-Switch	Not under eleven cus- tomer	
351	639	LIKELY	TRI-TECH METALS INC.	DD72492320000B0	QQ-N-286,UNS N05500	Not under eleven cus- tomer	
352	411		STEADFAST	RHFAC08K01V	QUAD 2-INPUT AND GAT	I3	
353	65		DOWKEY MICROWAVE	402A-430132A	SPDT Switch	Not under eleven cus- tomer	
354	685	LIKELY	TRI-TECH METALS INC.	DD99000950000B0	DRILL ROD D5X18, BAR	Not under eleven cus- tomer	
355	242		Beta Transformer	NH17109-1	COUPLER	KAI	K
356	550	LIKELY	TRI-TECH METALS INC.	DD25279270000B0	ASTM A311,UNS G D40X	Not under eleven cus- tomer	
357	809		S&K Electronics	16E4004-811	COUPLER,MUX BUS	KAI	F
358	755	LIKELY	TRI-TECH METALS INC.	SR3358P00642	SHEET, MIL-S-13281,C	Not under eleven cus- tomer	
359	630	LIKELY	TRI-TECH METALS INC.	DD58306440000B0	17-4PH-H1025 D60*L60	Not under eleven cus- tomer	
360	41		DOWKEY MICROWAVE	401J-220832A	Coaxial Switch, DC ~	Not under eleven cus- tomer	
361	788		ITT Enidine Incorporated	WR890008BM	BUFFER	MMSYS	
362	273		MESL MICROWAVE	11122-000-OL_ISS F	CIRCULATOR	HANWHA	K

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363	88		DOWKEY MICROWAVE	411CJW-4308	RF-Switch	Not under eleven cus- tomer	
364	155		DOWKEY MICROWAVE	561ACJ-480122	RF-Switch	Not under eleven cus- tomer	
365	36		DOWKEY MICROWAVE	401-6208	RF-Switch	Not under eleven cus- tomer	
366	98		DOWKEY MICROWAVE	431-520803	RF Switch	Not under eleven cus- tomer	
367	249		Beta Transformer	NH17147-1-170-90	COUPLER ASSY	KAI	K
368	119		DOWKEY MICROWAVE	521J-420803A	SW, MST-L-12-SMA-TTL	Not under eleven cus- tomer	
369	821		SURMET CORP.	R003378	SPINEL LENS	HANWHA	T
370	167		DOWKEY MICROWAVE	581-5308	RF Switch	Not under eleven cus- tomer	
371	111		DOWKEY MICROWAVE	461J-420803A-ROHS	RF Switch	Not under eleven cus- tomer	
372	239		Beta Transformer	HLP-6020-HREL-S	TRANSFORMER	KARI	K
373	587	LIKELY	TRI-TECH METALS INC.	DD25313070000B0	CDA NO.624 D70*L70,	Not under eleven cus- tomer	
374	299		VPT	SVGA0510S/EM	IC,DCDC CONVERTOR ,S	KAI	
375	514	LIKELY	TRI-TECH METALS INC.	ASTM D5989/0.71X0.71X0.40	ASTM D5989/0.75X0.75	Not under eleven cus- tomer	
376	838		AIR ROVER	FL60BA25	COOLING SYSTEM	SEGI	M
377	485	LIKELY	TRI-TECH METALS INC.	AMS4050/ALUM 7050-7541/.60X2.17X2.17	AMS4050/ALUM 7050-75	Not under eleven cus- tomer	
378	777		AGM CONTAINER CONTROLS, I	TA495-1461	CAP	HANWHA	M
379	276		MESL MICROWAVE	20K10135	WAVEGUIDE S/W	HANWHA	A
380	38		DOWKEY MICROWAVE	401A-2208	RF Switch	Not under eleven cus- tomer	
381	388		STEADFAST	920112002F(M54HC132KT)	MICROCIRCUIT, QUAD 2	KAI	C
382	790		FIRST SENSOR INC.	501526	DIODE-LASERQP45-Q TO	HANWHA	S
383	110		DOWKEY MICROWAVE	461J-420803A	SW,6MPT-L-12-SMA-TTL	Not under eleven cus- tomer	
384	703	LIKELY	TRI-TECH METALS INC.	FA84409691-003	ASTM B777-15, CLASS	Not under eleven cus- tomer	
385	293		VPT	DVSA2805S	Converter	HANWHA	T
386	85		DOWKEY MICROWAVE	411C-630832	RF-Switch	Not under eleven cus- tomer	
387	82		DOWKEY MICROWAVE	411C-420832A	RELAY-POWER	Not under eleven cus- tomer	

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388	545	LIKELY	TRI-TECH METALS INC.	DD25278410000B0	QQ-C-390 UNS C92300	Not under eleven cus- tomer	
389	764	LIKELY	TRI-TECH METALS INC.	Φ28.575 (1-1/8*72)	AMS-QQ-A-225/6-T851	Not under eleven cus- tomer	
390	745	LIKELY	TRI-TECH METALS INC.	QQ-A-250/11 AL_ALLOY/PLATE/6061T651	QQ-A-250/11 ALUMINIUM	Not under eleven cus- tomer	
391	567	LIKELY	TRI-TECH METALS INC.	DD25285910000B0	BAR, CDA624 D60X70	Not under eleven cus- tomer	
392	537	LIKELY	TRI-TECH METALS INC.	DD25277170000B0	BAR SUM43 D80*L40	Not under eleven cus- tomer	
393	154		DOWKEY MICROWAVE	545T-590802A-ROHS	RF-Switch	Not under eleven cus- tomer	
394	265		Beta Transformer	T1B21046B	TRANSFORMER-3	HANWHA	H
395	334		DIAMOND MICROWAVE	Q34501_AT	Assembly Traveler	EMWAVE	
396	384		STEADFAST	5962F8953901VXA	IC	KAI	S
397	75		DOWKEY MICROWAVE	411-420802A	RELAY-POWER	Not under eleven cus- tomer	
398	736	LIKELY	TRI-TECH METALS INC.	MMS 1597075/T73511.5X9.23X11	MMS 1597075/T7351/1.	Not under eleven cus- tomer	
399	269		Beta Transformer	TST-9017	TRANS PULSE;TST9017-	HANWHA	K
400	250		Beta Transformer	NH17147-2-105	COUPLER ASSY	KAI	K
401	779		Amglo Kemlite Labs, Inc.	AQL-3550	LAMP-FLASH-LAMP	HANWHA	T
402	610	LIKELY	TRI-TECH METALS INC.	DD25937842030B0	BAR UNS S17400 D15X4	Not under eleven cus- tomer	
403	171		DOWKEY MICROWAVE	581ST-530802A	RF-Switch	Not under eleven cus- tomer	
404	483	LIKELY	TRI-TECH METALS INC.	AMS4027 A6061-T6/0.16TX6.70X8.86	AMS4027 A6061-T6/0.1	Not under eleven cus- tomer	
405	427		STEADFAST	RHFLVDS31AK01V	QUAD LVDS TX	HAHWHA	S
406	91		DOWKEY MICROWAVE	412-2301	RF-Switch	Not under eleven cus- tomer	
407	68		DOWKEY MICROWAVE	402J-430132	RF-Switch	Not under eleven cus- tomer	
408	605	LIKELY	TRI-TECH METALS INC.	DD25452430000B0	UNS C61400 D290*L20,	Not under eleven cus- tomer	
409	697	LIKELY	TRI-TECH METALS INC.	EN AW-6082, T6/T651/T0.24IN X 4.33IN X	EN AW-6082, T6/T651/	Not under eleven cus- tomer	
410	346		DIAMOND MICROWAVE	Q34501_VTP	Verification Test PI	EMWAVE	
411	714	LIKELY	TRI-TECH METALS INC.	FA84409919-003	AMS_4016_A5052H-32+T	Not under eleven cus- tomer	
412	409		STEADFAST	RHF1401KSO1	RAD-HARD 14-BIT 20 M	I3	

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413	507	LIKELY	TRI-TECH METALS INC.	ASTM B21 H02 UNS C46400 D55*55L	BAR	Not under eleven cus- tomer	
414	476	LIKELY	TRI-TECH METALS INC.	AMS 5643 ROUND 17-4PH 1.875DIAx13.0	AMS 5643 ROUND 17-4P	Not under eleven cus- tomer	
415	495	LIKELY	TRI-TECH METALS INC.	AMS-QQ-A-250/4BARE2024/T851/0.25X48	AMS-QQ-A-250/4BARE20	Not under eleven cus- tomer	
416	143		DOWKEY MICROWAVE	545-5308	RF Switch	Not under eleven cus- tomer	
417	822		ADEX AEROSPACE, LLC	360PS01B1A	Switch, Push Button	CAPH	K
418	18		DOWKEY MICROWAVE	401-2308	SW-MS-F-28-SMA	Not under eleven cus- tomer	
419	281		MESL MICROWAVE	NRE	NON-RECURRING ENGINN	0	
420	840		AIR ROVER	SPKULCR36CA105F	SPARE PARTS KIT FOR THE (R)ULCR36CA-	SEGI	S
421	653	LIKELY	TRI-TECH METALS INC.	DD72493350000B0	BAR, ASTM B150 UNS C	Not under eleven cus- tomer	
422	344		DIAMOND MICROWAVE	Q34501_TP	Test Procedures	EMWAVE	
423	341		DIAMOND MICROWAVE	Q34501_SOW	SOW Complicane Matri	EMWAVE	
424	732	LIKELY	TRI-TECH METALS INC.	MMS 159/7075T7351X0.25X3.875X6.25	MMS 159/7075T7351/0.	Not under eleven cus- tomer	
425	461	LIKELY	TRI-TECH METALS INC.	6061-T6 AL ALLOY(ASTM B221)0.750X0.87	6061-T6 AL ALLOY(AST	Not under eleven cus- tomer	
426	781		WENZEL INTERNATIONAL INC	96136425	QUARTZ	HANWHA	K
427	296		VPT	DVSB2853R3D	DC-DC CONVERTER	HANWHA	F
428	180		DOWKEY MICROWAVE	R403-220802A	RELAY-POWER	Not under eleven cus- tomer	
429	116		DOWKEY MICROWAVE	521-420833A	RF Switch	Not under eleven cus- tomer	
430	150		DOWKEY MICROWAVE	545J-5308	RF-Switch, SP4T	Not under eleven cus- tomer	
431	392		STEADFAST	920305002F(M54HC74KT)	IC	KAI	S
432	532	LIKELY	TRI-TECH METALS INC.	DD21248000140B0	BAR UNS G10700 D44.5	Not under eleven cus- tomer	
433	5		Cambridge	6231HL848	Scanner	HANWHA	M
434	596	LIKELY	TRI-TECH METALS INC.	DD25315220000P0	AISIC1070T1.829(0.07	Not under eleven cus- tomer	
435	576	LIKELY	TRI-TECH METALS INC.	DD25310260000B0	BAR SUM43 D80*L40	Not under eleven cus- tomer	
436	170		DOWKEY MICROWAVE	581J-420803A	SW,8MPT-L-12-SMA-TTL	Not under eleven cus- tomer	
437	710	LIKELY	TRI-TECH METALS INC.	FA84409876-003	AMS_4117_A6061-T6+Ø2	Not under eleven cus- tomer	



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438	487	LIKELY	TRI-TECH METALS INC.	AMS4347_6013_T4_0.05X48X48	ALUM_ALLOY_AMS4347_B	Not under eleven cus- tomer	
439	101		DOWKEY MICROWAVE	431L-420823A	RF-Switch	Not under eleven cus- tomer	
440	512	LIKELY	TRI-TECH METALS INC.	ASTM D5989 2.00X2.00X0.25	ASTM D5989 2.00X2.00	Not under eleven cus- tomer	
441	584	LIKELY	TRI-TECH METALS INC.	DD25312360000B0	BAR, A535 G93106 D70	Not under eleven cus- tomer	
442	515	LIKELY	TRI-TECH METALS INC.	ASTM D6778/T0.06X23.7X39.38	ASTM D6778/T0.062X23	Not under eleven cus- tomer	
443	819		TRISTAR INC	738-276-A4109	SEAL-ROTARY SEAL;738	HAHWHA	F
444	527	LIKELY	TRI-TECH METALS INC.	DD21248000080B0	UNS G10700 D28.6*8.0	Not under eleven cus- tomer	
445	511	LIKELY	TRI-TECH METALS INC.	ASTM D 5989/1.97X1.97X23.65	ASTM D 5989/1.97X1.9	Not under eleven cus- tomer	
446	130		DOWKEY MICROWAVE	535-530802A	RF-Switch	Not under eleven cus- tomer	
447	466	LIKELY	TRI-TECH METALS INC.	6X4X0.25	ASTM D5989 6X4X0.250	Not under eleven cus- tomer	
448	105		DOWKEY MICROWAVE	441-490803A	RF SWITCH/RELAY 4-Po	Not under eleven cus- tomer	
449	413		STEADFAST	RHFAC16244K1	IC-DATA BUFFER	MMSYS	
450	627	LIKELY	TRI-TECH METALS INC.	DD55863570000B0	BAR, UNS C62400 (D76	Not under eleven cus- tomer	
451	289		VPT	DVHF285R2S	Converter	HANWHA	T
452	683	LIKELY	TRI-TECH METALS INC.	DD99000920000B0	BAR,PLATE,LEVER-MOUN	Not under eleven cus- tomer	
453	200		Data Device Corporation	BU-67102U100L-CA0	IC	HANWHA	L
454	275		MESL MICROWAVE	18K9671	MODULE-FERRITE SWITC	HANWHA	K
455	237		Beta Transformer	DB30010	BRKT-TUBE	DSK	K
456	516	LIKELY	TRI-TECH METALS INC.	ASTM-B152,C10200 COND H02	SHEET,COPPER	Not under eleven cus- tomer	
457	620	LIKELY	TRI-TECH METALS INC.	DD28599430000B0	BAR, CDA NO.624 D50*	Not under eleven cus- tomer	
458	282		MESL MICROWAVE	XPM11206	CIRCULATOR	HANWHA	K
459	370		STEADFAST	520700509R	TRANSISTOR	KAI	S
460	66		DOWKEY MICROWAVE	402J-280132A	RF Switch	Not under eleven cus- tomer	
461	578	LIKELY	TRI-TECH METALS INC.	DD25310520000P0	PLATE, ASTM A322,G41	Not under eleven cus- tomer	
462	811		SYNERGY MICROWAVE	CLP-401	FREQ-MIXER	HAHWHA	K H

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463	303		VPT	VXR30-283R3S	ELECTRONIC MODULE,ST	KAI	
464	607	LIKELY	TRI-TECH METALS INC.	DD25937840020B0	UNS S17400 D5X40, BA	Not under eleven cus- tomer	
465	79		DOWKEY MICROWAVE	411C-290802A	SWITCH, RF DPDT/TRAN	Not under eleven cus- tomer	
466	424		STEADFAST	RHFL7913SCA1	NEGATIVE LDO	I3	
467	233		Beta Transformer	BUS-25679	TRANSFORMER	HANWHA	H
468	326		DIAMOND MICROWAVE	116-2255-0_AT	ACCEPTANCE TEST (LOT	EMWAVE	2
469	497	LIKELY	TRI-TECH METALS INC.	AMSQQA250/5/ALUMINUM ALLOY CLAD/	AMSQQA250/5/ALUMINUM	Not under eleven cus- tomer	
470	633	LIKELY	TRI-TECH METALS INC.	DD61388520000B0	MIL-S-46850,D65X530,	Not under eleven cus- tomer	
471	59		DOWKEY MICROWAVE	402-230132	RF Switch	Not under eleven cus- tomer	
472	20		DOWKEY MICROWAVE	401-230832A	RF-Switching	Not under eleven cus- tomer	
473	260		Beta Transformer	NH17147-6-200-45	COUPLER ASSY	KAI	K
474	134		DOWKEY MICROWAVE	535J-590802A	SW, 3MPQ-NO-15-SMA-T	Not under eleven cus- tomer	
475	670	LIKELY	TRI-TECH METALS INC.	DD73109600500B0	AMPCO GR 18 D70X50,	Not under eleven cus- tomer	
476	73		DOWKEY MICROWAVE	403A-220802A	RF Switch	Not under eleven cus- tomer	
477	787		ITT Enidine Incorporated	WR8-600-08-BM	ABSORBER-WIRE ROPE I	HANWHA	F
478	551	LIKELY	TRI-TECH METALS INC.	DD25279520000B0	ASTM A322 G93100 D16	Not under eleven cus- tomer	
479	458	LIKELY	TRI-TECH METALS INC.	6061-T6 AL ALLOY(ASTM B221)/0.375X0.6	6061-T6 AL ALLOY(AST	Not under eleven cus- tomer	
480	161		DOWKEY MICROWAVE	565-530822A	RF-Switch	Not under eleven cus- tomer	
481	83		DOWKEY MICROWAVE	411C-420832A-ROHS	RF-Switch	Not under eleven cus- tomer	
482	692	LIKELY	TRI-TECH METALS INC.	DD99002800000B0	DYNALLOY 602 D38*L75	Not under eleven cus- tomer	
483	464	LIKELY	TRI-TECH METALS INC.	6061-T6 AL ALLOY/ASTM B221/0.800X4.61	6061-T6 AL ALLOY/AST	Not under eleven cus- tomer	
484	304		KNT ENGINEERING	ANV-126-700	IMAGE TUBE TEST ADAP	HANWHA	A
485	775		AGM CONTAINER CONTROLS, I	TA356-2345P	HUMIDITY INDICATOR	HANWHA	M
486	689	LIKELY	TRI-TECH METALS INC.	DD99001640000B0	BAR,GEAR-1-SPUR, UNS	Not under eleven cus- tomer	
487	95		DOWKEY MICROWAVE	412-420132	RF-Switch	Not under eleven cus- tomer	

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488	786		ITT Enidine Incorporated	WR16-600-08-EM	ISOLATOR	MMSYS	
489	297		VPT	DVTR283R3S	CONVERTER-DC/DC	HANWHA	F
490	292		VPT	DVMN28	CONVERTER-DC/DC	HANWHA	K
491	659	LIKELY	TRI-TECH METALS INC.	DD72494870000B0	AMS 6308 UNS K71040	Not under eleven cus- tomer	
492	70		DOWKEY MICROWAVE	403-2208	RF Switch	Not under eleven cus- tomer	
493	51		DOWKEY MICROWAVE	401T-290832A	RF-Switch	Not under eleven cus- tomer	
494	410		STEADFAST	RHF200K1	RAD-HARD FULLY DIFFE	MMSYS	
495	197		Data Device Corporation	BU-64743GC-290	IC-BUS CONTROLLER	HANWHA	L
496	680	LIKELY	TRI-TECH METALS INC.	DD99000810000B0	UNS G41500 RESULF D1	Not under eleven cus- tomer	
497	560	LIKELY	TRI-TECH METALS INC.	DD25283780000P0	CDA NO.614 T25.4*60*	Not under eleven cus- tomer	
498	439	LIKELY	TRI-TECH METALS INC.	0.008INCHX11.9INCHX15.75INCH	STAINLESS STEEL (304	Not under eleven cus- tomer	
499	561	LIKELY	TRI-TECH METALS INC.	DD25283890000B0	BAR, AL BLONZE D30*1	Not under eleven cus- tomer	
500	759	LIKELY	TRI-TECH METALS INC.	SR3358P01752	SHEET, MIL-S-13281,C	Not under eleven cus- tomer	
501	87		DOWKEY MICROWAVE	411CJT-230832-ROHS	RF-Switch	Not under eleven cus- tomer	
502	31		DOWKEY MICROWAVE	401-430802A	RF-Switch	Not under eleven cus- tomer	
503	826		ADEX AEROSPACE, LLC	8G5200A	MOTOR ASSY, AZ TORQU	HANWHA	K
504	274		MESL MICROWAVE	11206-000-OL_iss 2	CIRCULATOR	HANWHA	K
505	256		Beta Transformer	NH17147-4-130	COUPLER	KAI	K
506	758	LIKELY	TRI-TECH METALS INC.	SR3358P00952	SHEET, MIL-S-13281,C	Not under eleven cus- tomer	
507	301		VPT	TP-013	PAD,THERMAL,VXR15	KAI	
508	78		DOWKEY MICROWAVE	411C-230832A	RF SWITCH 28VDC	Not under eleven cus- tomer	
509	259		Beta Transformer	NH17147-5-105	COUPLER	KAI	K
510	217		Data Device Corporation	SDC-14566-105	IC	HANWHA	K
511	769		AGM CONTAINER CONTROLS, I	T364-SG-246P	UNIT-DESICCATOR	HANWHA	S
512	756	LIKELY	TRI-TECH METALS INC.	SR3358P00792	SHEET, MIL-S-13281,C	Not under eleven cus- tomer	

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513	784		ITT Enidine Incorporated	WR12-806-06-SM	ABSORBER-WIRE ROPE I	MMSYS	
514	420		STEADFAST	RHFACT244K01V	OCTAL BUFFERS AND LI	I3	
515	798		KEYSTONE ELECTRONICS CORP	C-16681-AIR	TERMINAL TURRET	HANWHA	IL
516	21		DOWKEY MICROWAVE	401-2308-ROHS	RF-Switch	Not under eleven cus- tomer	
517	774		AGM CONTAINER CONTROLS, I	TA348-234P	UNIT-HUMIDTY INDICAT	HANWHA	3 c D
518	841		AIR ROVER	RULHT120CA	COOLING SYSTEM	SEGI	
519	540	LIKELY	TRI-TECH METALS INC.	DD25277200000B0	BAR, UNS G11440 D120	Not under eleven cus- tomer	
520	456	LIKELY	TRI-TECH METALS INC.	2.36X.40X.40	ASTM B777-15, CLASS2	Not under eleven cus- tomer	
521	661	LIKELY	TRI-TECH METALS INC.	DD72495080000B	BAR,GEAR,SPUP, 17-4P	Not under eleven cus- tomer	
522	652	LIKELY	TRI-TECH METALS INC.	DD72493340000B0	BAR, ASTM B150 UNS C	Not under eleven cus- tomer	
523	24		DOWKEY MICROWAVE	401-290802A	RF-Switch	Not under eleven cus- tomer	
524	619	LIKELY	TRI-TECH METALS INC.	DD28599420000B0	BAR, CDA NO.624 D45*	Not under eleven cus- tomer	
525	820		TRISTAR INC	73830-X2857-A4109	SEAL-ROTARY SEAL;738	HAHWHA	P
526	789		FIRST SENSOR INC.	500798	DIODE-LASER	HANWHA	H
527	218		Data Device Corporation	SDC-14567-125	IC	HANWHA	E
528	556	LIKELY	TRI-TECH METALS INC.	DD25281850000B0	BAR, AMPCO BRONZE GR	Not under eleven cus- tomer	
529	824		ADEX AEROSPACE, LLC	3E9209A	EL RESOLVER ASSY	HANWHA	K
530	333		DIAMOND MICROWAVE	Q34501	SPACE LEVEL ROTARY J	EMWAVE	
531	421		STEADFAST	RHFACT244K1	RAD-HARD OCTAL BUS B	I3	
532	825		ADEX AEROSPACE, LLC	8G3-200A	EL TORQUE MOTOR ASSY	HANWHA	K
533	8		Atlantic Gasket	60763548	Pad	HANWHA	K
534	657	LIKELY	TRI-TECH METALS INC.	DD72494840000B0	BAR, AMS 6308 UNS K7	Not under eleven cus- tomer	
535	462	LIKELY	TRI-TECH METALS INC.	6061-T6 AL ALLOY(ASTM B221)0.875X0.87	6061-T6 AL ALLOY(AST	Not under eleven cus- tomer	
536	563	LIKELY	TRI-TECH METALS INC.	DD25283960000B0	BAR, UNS C17200 D25X	Not under eleven cus- tomer	



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537	804		Premier Technical Services	M2200NC-T-DP-24-HI-FG03-FG03(+)	NETWORK SWITCHES-(+)	HANWHA	M
538	280		MESL MICROWAVE	KD10427	26.5-40 GHZ COAXIAL	EMWAVE	
539	184		Data Device Corporation	BU-61559D1-110	PERIPHERAL MICROPROC	HANWHA	H
540	520	LIKELY	TRI-TECH METALS INC.	DD16092360390B0	SNCM440, D15*L40, BA	Not under eleven cus- tomer	
541	510	LIKELY	TRI-TECH METALS INC.	ASTM B777 CLASS2/1.25X1.438X2.25	ASTM B777 CLASS2/1.2	Not under eleven cus- tomer	
542	164		DOWKEY MICROWAVE	565J-580802A	RF-Switch	Not under eleven cus- tomer	
543	623	LIKELY	TRI-TECH METALS INC.	DD28603780000B0	C6241 D450X25, BAR	Not under eleven cus- tomer	
544	97		DOWKEY MICROWAVE	412-480132	SW, LTS-L-24-N-I	Not under eleven cus- tomer	
545	423		STEADFAST	RHFL7913KPA-02V	RAD-HARD ADJUSTABLE	SATREC	
546	173		DOWKEY MICROWAVE	919C70100	SW, SPDT-F-28-SMA	Not under eleven cus- tomer	
547	300		VPT	SVGA0510S/H+	IC, DCDC CONVERTOR ,	KAI	
548	615	LIKELY	TRI-TECH METALS INC.	DD25937844250B0	UNS S17400 D10X100,	Not under eleven cus- tomer	
549	349		INRAD OPTICS	8U3S3072	40 X 40 X 40mm Beams	HANWHA	H
550	25		DOWKEY MICROWAVE	401-290802A_SETUP	SET-UP FEE	Not under eleven cus- tomer	
551	94		DOWKEY MICROWAVE	412-380132	RF Switch	Not under eleven cus- tomer	
552	354		DSTI	LSMEA8000	ROTARY JOINT	HANWHA	L
553	700	LIKELY	TRI-TECH METALS INC.	EN AW-6082, T6/T651/T0.39IN X 4.06IN X	EN AW-6082, T6/T651/	Not under eleven cus- tomer	
554	503	LIKELY	TRI-TECH METALS INC.	ASTM A564/SUS H1025,17-4PH/Φ3.35X0.6	ASTM A564/SUS H1025,	Not under eleven cus- tomer	
555	667	LIKELY	TRI-TECH METALS INC.	DD72515880000B0	UNS S17400 D150*100,	Not under eleven cus- tomer	
556	772		AGM CONTAINER CONTROLS, I	TA289-2844	VALVE-BREATHER	HANWHA	3 c
557	137		DOWKEY MICROWAVE	535T-520822A-ROHS	RF Switch	Not under eleven cus- tomer	
558	549	LIKELY	TRI-TECH METALS INC.	DD25278920000B0	QQ-N-286 FORM1 D40*L	Not under eleven cus- tomer	
559	220		Data Device Corporation	XD-14591D5-302	SYNCHRO TO DIGITAL C	HANWHA	V
560	622	LIKELY	TRI-TECH METALS INC.	DD28602110000B0	QQ-N-286 D31.8*195,	Not under eleven cus- tomer	
561	263		Beta Transformer	RT500078	MUX TERMINATOR	KAI	S

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562	444	LIKELY	TRI-TECH METALS INC.	0.500X1.00X9.00	SAE AMS 3611 0.500X1	Not under eleven cus- tomer	
563	454	LIKELY	TRI-TECH METALS INC.	1.25X1.438X2.25	ASTM B777-15, CLASS2	Not under eleven cus- tomer	
564	168		DOWKEY MICROWAVE	581-590803E	SWITCH, RF SP8T, OPE	Not under eleven cus- tomer	
565	342		DIAMOND MICROWAVE	Q34501_SV	Sine Vibration	EMWAVE	
566	767		AGM CONTAINER CONTROLS, I	BL/D7410/10	SILICA GEL	HANWHA	S
567	776		AGM CONTAINER CONTROLS, I	TA370-234P	HUMIDITYINDICATOR	HANWHA	F
568	178		DOWKEY MICROWAVE	MP-2U18S-18T-GPIB	RF MATRIX	Not under eleven cus- tomer	
569	799		KEYSTONE ELECTRONICS CORP	C-16708-AIR	TERMINAL FEEDTHROUGH	HANWHA	II
570	72		DOWKEY MICROWAVE	403-2908	RF Switch	Not under eleven cus- tomer	
571	654	LIKELY	TRI-TECH METALS INC.	DD72493840000B0	AMS5643 UNS S17400 D	Not under eleven cus- tomer	
572	724	LIKELY	TRI-TECH METALS INC.	FA84410632-003	AMS-QQ-S-763, STS316	Not under eleven cus- tomer	
573	177		DOWKEY MICROWAVE	EXPEDITE	EXPEDITE CHARGE	Not under eleven cus- tomer	
574	115		DOWKEY MICROWAVE	521-290803A	RF-Switch	Not under eleven cus- tomer	
575	355		DSTI	LSMFB6100	ROTARY JOINT	HANWHA	L
576	601	LIKELY	TRI-TECH METALS INC.	DD25320630000B0	CDA NO.624 D50*L50,	Not under eleven cus- tomer	
577	494	LIKELY	TRI-TECH METALS INC.	AMS-QQ-A-250/4BARE2024/T81/0.063X48	AMS-QQ-A-250/4BARE20	Not under eleven cus- tomer	
578	518	LIKELY	TRI-TECH METALS INC.	ASTMD709TYPE I GRADEXX/PLASTI- CLAMI	ASTM D709 TYPE I GRA	Not under eleven cus- tomer	
579	711	LIKELY	TRI-TECH METALS INC.	FA84409881-003	AMS_4117_A6061-T6+Ø5	Not under eleven cus- tomer	
580	211		Data Device Corporation	RP-21225D0-100	ICPOWER CONTROLLER	HANWHA	K
581	325		DIAMOND MICROWAVE	116-2255-0	DUAL CHANNEL COAXIAL	EMWAVE	2
582	193		Data Device Corporation	BU-63705F3-120	IC-BUS CONTROLLER	HANWHA	S
583	27		DOWKEY MICROWAVE	401-420802S	RF-Switch	Not under eleven cus- tomer	
584	634	LIKELY	TRI-TECH METALS INC.	DD61626920000B0	UNS G41500 RESULF D2	Not under eleven cus- tomer	
585	37		DOWKEY MICROWAVE	401-620832	RF-Switch	Not under eleven cus- tomer	
586	835		AIR ROVER	78-0041	CARTRIDGE, OIL FILTE	SEGI	M

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587	400		STEADFAST	940805201F(M54HC4066)	K7 FM IC, QUAD BILAT	KAI	S
588	385		STEADFAST	920110602F(M54HC08KT)	IC	KAI	S
589	663	LIKELY	TRI-TECH METALS INC.	DD72501500000B0	BRACKET,CASTING, UNS	Not under eleven cus- tomer	
590	796		TELEDYNE JUDSON TECHNOLO	J16PS-8E6-S05M-HS	Position SENSING Det	HANWHA	F
591	771		AGM CONTAINER CONTROLS, I	TA240-05-05-R	BREATHING VALVE	SSTANDARD	S
592	252		Beta Transformer	NH17147-3-105	COUPLER ASSY	KAI	K
593	595	LIKELY	TRI-TECH METALS INC.	DD25313500000B0	UNS C62400 (D76.2*16	Not under eleven cus- tomer	
594	251		Beta Transformer	NH17147-2-215-90	COUPLER ASSY	KAI	K
595	108		DOWKEY MICROWAVE	441L-420823A-ROHS	RF-Switch	Not under eleven cus- tomer	
596	757	LIKELY	TRI-TECH METALS INC.	SR3358P00793	SHEET, MIL-S-13281,C	Not under eleven cus- tomer	
597	209		Data Device Corporation	RD-19231FX-205	IC	HANWHA	U
598	229		Beta Transformer	264A609-1	COUPLER	KAI	E
599	232		Beta Transformer	B-2204	TRANS PULSE	HANWHA	H
600	337		DIAMOND MICROWAVE	Q34501_MPL	Materials & Process	EMWAVE	
601	441	LIKELY	TRI-TECH METALS INC.	0.032INCHX11.9INCHX15.75INCH	STAINLESS STEEL (304	Not under eleven cus- tomer	
602	509	LIKELY	TRI-TECH METALS INC.	ASTM B36/.010X24.0X36.0	CARTRIDGE BRASS ALY	Not under eleven cus- tomer	
603	317		BRANDYWINE	77-HSIS21401	GRATING_VNIR	HANWHA	G
604	279		MESL MICROWAVE	22C11309	FREQ-ISOLATOR	HANWHA	K
605	479	LIKELY	TRI-TECH METALS INC.	AMS QQ-S-764, CLASS 304	AMS QQ-S-764, CLASS	Not under eleven cus- tomer	
606	320		BRANDYWINE	77-HSIS21702	GRATING SWIR DUMMY	HANWHA	G
607	548	LIKELY	TRI-TECH METALS INC.	DD25278910000B0	QQ-N-286 FORM1 D40*L	Not under eleven cus- tomer	
608	470	LIKELY	TRI-TECH METALS INC.	AMS 4610BRASS ROD	FREE CUTTING BARS AN	Not under eleven cus- tomer	
609	570	LIKELY	TRI-TECH METALS INC.	DD25287390000B0	BAR, AMPCO BRONZE GR	Not under eleven cus- tomer	
610	323		DIAMOND MICROWAVE	10-2621-0	6-CH R/J REV. B, WR-	EMWAVE	C
611	396		STEADFAST	930604202F(M54HC165KT)	IC	KAI	S

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612	147		DOWKEY MICROWAVE	545C-520822A	RF-Switch	Not under eleven cus- tomer	
613	535	LIKELY	TRI-TECH METALS INC.	DD25277140000B0	BAR, SUM43 D100*L40	Not under eleven cus- tomer	
614	434		STEADFAST	RHRPM4423K01V	DUAL INVERTING MOSFE	I3	
615	114		DOWKEY MICROWAVE	521-220833L-1	RF Switch	Not under eleven cus- tomer	
616	10		P3 America	MCP22/7734	Potentiometer	HANWHA	K
617	687	LIKELY	TRI-TECH METALS INC.	DD99001560000B0	BAR,GEAR-1-SPUR AISI	Not under eleven cus- tomer	
618	123		DOWKEY MICROWAVE	521U-420833A-ROHS	RF-Switch	Not under eleven cus- tomer	
619	61		DOWKEY MICROWAVE	402-4201	RF SWITCH, LATCHING	Not under eleven cus- tomer	
620	669	LIKELY	TRI-TECH METALS INC.	DD73109200300B0	BAR,PIN-DOWEL, UNS G	Not under eleven cus- tomer	
621	45		DOWKEY MICROWAVE	401K-220832A	RF-Switch	Not under eleven cus- tomer	
622	407		STEADFAST	M54HC4050K1	MICROCIRCUIT, HIGH-S	KAI	S
623	474	LIKELY	TRI-TECH METALS INC.	AMS 5519, 301 FULL HARD T0.008, 40X40	AMS 5519, 301 FULL H	Not under eleven cus- tomer	
624	530	LIKELY	TRI-TECH METALS INC.	DD21248000110B0	UNS G10700 D44.5*10.	Not under eleven cus- tomer	
625	475	LIKELY	TRI-TECH METALS INC.	AMS 5643 ROUND 17-4PH 1.875 DIA X 1	AMS 5643 ROUND 17-4P	Not under eleven cus- tomer	
626	814		TPA MOTION, LLC	F08S1B5-F6A-132	GEAR	HAHWHA	K
627	628	LIKELY	TRI-TECH METALS INC.	DD55969280000B0	17-4PH UNS S17400,D2	Not under eleven cus- tomer	
628	364		STEADFAST	2N5154SHRG	RAD-HARD 80 V, 5 A N	KAI	
629	739	LIKELY	TRI-TECH METALS INC.	MMS1597075/T73512.5X4.25X5.5	MMS1597075/T7351/2.5	Not under eleven cus- tomer	
630	738	LIKELY	TRI-TECH METALS INC.	MMS 1597075/T73513X3.37X4.37	MMS 1597075/T7351/3X	Not under eleven cus- tomer	
631	473	LIKELY	TRI-TECH METALS INC.	AMS 5519, 301 FULL HARD T0.004, 40X40	AMS 5519, 301 FULL H	Not under eleven cus- tomer	
632	836		AIR ROVER	78-0042	FUEL FILTER	SEGI	M
633	120		DOWKEY MICROWAVE	521JU-280833A	RF-Switch	Not under eleven cus- tomer	
634	431		STEADFAST	RHFXHR162245K03V	CMOS 16-BT BUFFER TR	I3	
635	135		DOWKEY MICROWAVE	535K-5308	RF Switch	Not under eleven cus- tomer	



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636	624	LIKELY	TRI-TECH METALS INC.	DD30123440000B0	UNS C62300 D115*L60,	Not under eleven cus- tomer	
637	432		STEADFAST	RH-PM4423K1	DUAL INVERTING LOW-S	I3	
638	831		AIR ROVER	11-1094	CONNECTOR, DUCT, 8"	SEGI	S
639	581	LIKELY	TRI-TECH METALS INC.	DD25311820000B0	UNS G41500 D114.3*80	Not under eleven cus- tomer	
640	817		TOP MICROWAVE	TM830TO8	VCO EPOXY	HAHWHA	P
641	693	LIKELY	TRI-TECH METALS INC.	DD99002810000B0	DYNALLOY 602 D25*L60	Not under eleven cus- tomer	
642	797		TELEDYNE JUDSON TECHNOLO	PA-9-44	AMPLIFIER-FOR INSB D	HANWHA	H
643	839		AIR ROVER	FL36BA25-AI	COOLING SYSTEM	SEGI	D
644	829		Phytron, Inc	VSS 33.200.0.6-CR-VGPL32/100-FM-AIRTE	MOTOR GEARED-STEPPER	HANWHA	S
645	569	LIKELY	TRI-TECH METALS INC.	DD25286620000B0	AMPCO BRONZE GR 8 D7	Not under eleven cus- tomer	
646	493	LIKELY	TRI-TECH METALS INC.	AMS-QQ-A-250/12_7075_T73_0.05X48X48	ALUM_ALLOY_AMS-QQ-A-	Not under eleven cus- tomer	
647	463	LIKELY	TRI-TECH METALS INC.	6061-T6 AL ALLOY/ASTM B221/0.6X0.6X4.	6061-T6 AL ALLOY/AST	Not under eleven cus- tomer	
648	183		Data Device Corporation	28LV010RTFI-20	IC	KAI	S
649	225		Beta Transformer	33920	TRANSFORMER	HANWHA	P
650	19		DOWKEY MICROWAVE	401-230802A	RF-Switch	Not under eleven cus- tomer	
651	40		DOWKEY MICROWAVE	401AIT-280832	RF Switch	Not under eleven cus- tomer	
652	583	LIKELY	TRI-TECH METALS INC.	DD25312340000B0	AISI4150 D50*L365, B	Not under eleven cus- tomer	
653	144		DOWKEY MICROWAVE	545-530802A	RF-Switch	Not under eleven cus- tomer	
654	207		Data Device Corporation	OSC-15801-110	IC	KAI	P
655	129		DOWKEY MICROWAVE	535-5308	RF Switch	Not under eleven cus- tomer	
656	100		DOWKEY MICROWAVE	431J-420803A-ROHS	RF Switch	Not under eleven cus- tomer	
657	7		B.E.Meyer	428-UAV-227-2	Laser Sensor	HANWHA	K
658	644	LIKELY	TRI-TECH METALS INC.	DD72492510000B0	AMS 3670/3 D40X35, B	Not under eleven cus- tomer	
659	656	LIKELY	TRI-TECH METALS INC.	DD72493900000B0	AMS5643 UNS S17400 D	Not under eleven cus- tomer	

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660	801		SHENZHEN LONGSUN ACOUST	ER46H17-75	TRANSDUCER	HANWHA	H
661	373		STEADFAST	5962F0252403VUC(RHFL4913SCA-07V)	IC	KAI	S
662	451	LIKELY	TRI-TECH METALS INC.	1.00X1.25X3.25	ASTM D5989 1.00X1.25	Not under eleven cus- tomer	
663	298		VPT	DVTR28512T	DC/DC CONVERTER	HANWHA	T V
664	486	LIKELY	TRI-TECH METALS INC.	AMS4316/ALCLAD/7075/T76/0.08X48X48	AMS4316/ALCLAD/7075/	Not under eleven cus- tomer	
665	525	LIKELY	TRI-TECH METALS INC.	DD21248000060B0	UNS G10700 D15.9X6.0	Not under eleven cus- tomer	
666	477	LIKELY	TRI-TECH METALS INC.	AMS QQ-S-763, CLASS304 Ø0.63X31.50	AMS QQ-S-763, CLASS3	Not under eleven cus- tomer	
667	80		DOWKEY MICROWAVE	411C-3308	RF Switch	Not under eleven cus- tomer	
668	139		DOWKEY MICROWAVE	541-490803A	Coaxial Switches	Not under eleven cus- tomer	
669	555	LIKELY	TRI-TECH METALS INC.	DD25279820000B0	UNS T30106 D127*100,	Not under eleven cus- tomer	
670	543	LIKELY	TRI-TECH METALS INC.	DD25277250000B0	BAR, ASTM A311,UND30	Not under eleven cus- tomer	
671	704	LIKELY	TRI-TECH METALS INC.	FA84409705-003	AMS-QQ-S-763, STS316	Not under eleven cus- tomer	
672	586	LIKELY	TRI-TECH METALS INC.	DD25312770000B0	QQ-N-286 (D25.4*285)	Not under eleven cus- tomer	
673	3		CPI	BLP2018	Receiver Protector	HANWHA, QNION	M
674	330		DIAMOND MICROWAVE	116-2255-0_TPR	TEST PROCEDURE REVIS	EMWAVE	2
675	791		FIRST SENSOR INC.	3001433	DIODE-LASER	HANWHA	L
676	748	LIKELY	TRI-TECH METALS INC.	QQ-A-250/5/ALUMINUM ALLOY CLAD/20	QQ-A-250/5/ALUMINUM	Not under eleven cus- tomer	
677	552	LIKELY	TRI-TECH METALS INC.	DD25279590000B0	BAR, CDA NO.624 EXT	Not under eleven cus- tomer	
678	46		DOWKEY MICROWAVE	401KT-220802A	RF Switch	Not under eleven cus- tomer	
679	318		BRANDYWINE	77-HSIS21402	GRATING VNIR DUMMY	HANWHA	G
680	808		S&K Electronics	16E4004-809	COUPLER,MUX BUS	KAI	F
681	141		DOWKEY MICROWAVE	541A-4801	RF-Switch	Not under eleven cus- tomer	
682	648	LIKELY	TRI-TECH METALS INC.	DD72492550000B0	BAR, UNS C63000 D30X	Not under eleven cus- tomer	
683	733	LIKELY	TRI-TECH METALS INC.	MMS 1597075/T73511.25X2.83X3.6	MMS 1597075/T7351/1.	Not under eleven cus- tomer	

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684	506	LIKELY	TRI-TECH METALS INC.	ASTM B209 5052-H32/0.20X48.1X48.1	ASTM B209 5052-H32/.	Not under eleven cus- tomer	
685	778		AGM CONTAINER CONTROLS, I	TA770-1302	VALVE	HANWHA	M
686	196		Data Device Corporation	BU-64743G8-290	1553 CONTROLLER	HANWHA	K
687	50		DOWKEY MICROWAVE	401T-230832A	RF Switch	Not under eleven cus- tomer	
688	773		AGM CONTAINER CONTROLS, I	TA292-05-05-R	VALVE	HANWHA	L
689	138		DOWKEY MICROWAVE	535T-530822A	SWITCH	Not under eleven cus- tomer	
690	783		ITT Enidine Incorporated	WR12-800-08-S	SHOCK ABSORBOR	MMSYS	
691	498	LIKELY	TRI-TECH METALS INC.	AMS-QQ-S-763, STS304/Φ2.09X6.38	AMS-QQ-S-763, STS304	Not under eleven cus- tomer	
692	405		STEADFAST	JANSF2N3700UB	TR, NPN, GENERAL, 80	KAI	C
693	109		DOWKEY MICROWAVE	461C-420822	RF-Switch	Not under eleven cus- tomer	
694	345		DIAMOND MICROWAVE	Q34501_TT	Thermal RF & Torque	EMWAVE	
695	128		DOWKEY MICROWAVE	535-5208	RF Switch	Not under eleven cus- tomer	
696	502	LIKELY	TRI-TECH METALS INC.	ASTM A276 T304/304L STS/Φ36.51(1-7/16	ASTM A276 T304/304L	Not under eleven cus- tomer	
697	728	LIKELY	TRI-TECH METALS INC.	L-605	BAR, ASTM F90-09, DI	Not under eleven cus- tomer	
698	60		DOWKEY MICROWAVE	402-320132	RF Switch	Not under eleven cus- tomer	
699	338		DIAMOND MICROWAVE	Q34501_MPR	Monthly Progress Rep	EMWAVE	
700	49		DOWKEY MICROWAVE	401T-220832A-ROHS	RF Switch	Not under eleven cus- tomer	
701	226		Beta Transformer	40737	IC	HANWHA	K
702	63		DOWKEY MICROWAVE	402A-420132A	SWITCH	Not under eleven cus- tomer	
703	23		DOWKEY MICROWAVE	401-2808-ROHS	RF-Switch	Not under eleven cus- tomer	
704	459	LIKELY	TRI-TECH METALS INC.	6061-T6 AL ALLOY(ASTM B221)0.46X3.60X	6061-T6 AL ALLOY(AST	Not under eleven cus- tomer	
705	631	LIKELY	TRI-TECH METALS INC.	DD58309020000B0	UNS C62400 D80*L40,	Not under eleven cus- tomer	
706	770		AGM CONTAINER CONTROLS, I	TA238-037-3	RELIEF VALVE	SSTANDARD	S
707	277		MESL MICROWAVE	22C11005	FREQ-CIRCULATOR	HANWHA	M
708	419		STEADFAST	RHFACT138K1	RAD-HARD 3 TO 8 LINE	I3	

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709	284		VPT	DV200-2815D	DC-DC CONVERTER	HANWHA	P
710	44		DOWKEY MICROWAVE	401J-480832	RF Switch	Not under eleven customer	
711	415		STEADFAST	RHFAC32K1	54AC Rad-Hard Quad 2	I3	
712	478	LIKELY	TRI-TECH METALS INC.	AMS QQ-S-763, CLASS304/Ø0.99 X 7.49	AMS QQ-S-763, CLASS3	Not under eleven customer	
713	285		VPT	DVHF2805DF	DC-DC CONVERTER	HANWHA	H
714	412		STEADFAST	RHFAC08K1	54AC Rad-Hard Quad 2	I3	
715	366		STEADFAST	520101904R	TRN LNPN 160V 500MA	KAI	S
716	729	LIKELY	TRI-TECH METALS INC.	MIL-I-24768/2 - GEE 10	MIL-I-24768/2 - GEE	Not under eleven customer	
717	425		STEADFAST	RHFLVDS2281K01V	Dual 4x4 LVDS Crosssp	I3	
718	568	LIKELY	TRI-TECH METALS INC.	DD25285930000B0	BAR, QQ-B-637 D25X70	Not under eleven customer	
719	577	LIKELY	TRI-TECH METALS INC.	DD25310510000P0	PLATE, ASTM A322,G41	Not under eleven customer	
720	408		STEADFAST	RH-AD128K1	Rad-Hard 8-channel 1	SATREC	
721	632	LIKELY	TRI-TECH METALS INC.	DD61388320000B0	BAR, UNS C62400 (76.	Not under eleven customer	
722	152		DOWKEY MICROWAVE	545J-5308-ROHS	RF-Switch	Not under eleven customer	
723	103		DOWKEY MICROWAVE	433-430802E	SWITCH	Not under eleven customer	
724	684	LIKELY	TRI-TECH METALS INC.	DD99000930000B0	BAR,PIN,LEVER, DRILL	Not under eleven customer	
725	53		DOWKEY MICROWAVE	401T-620832	RF-Switch	Not under eleven customer	
726	753	LIKELY	TRI-TECH METALS INC.	SR3354P00202	SHEET, MIL-S-13281,C	Not under eleven customer	
727	43		DOWKEY MICROWAVE	401J-420832	SPDT, RF Switch	Not under eleven customer	
728	377		STEADFAST	5962F8761501VXA	IC	KAI	S
729	194		Data Device Corporation	BU-63705F3-300	IC-BUS CONTROLLER	HANWHA	S
730	752	LIKELY	TRI-TECH METALS INC.	SR3353P00792	SHEET, MIL-S-13281,C	Not under eleven customer	
731	414		STEADFAST	RHFAC32K01V	QUAD 2-INPUT OR GATE	I3	
732	58		DOWKEY MICROWAVE	401Y-2211-ROHS	RF-Switch	Not under eleven customer	



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733	676	LIKELY	TRI-TECH METALS INC.	DD73336900800B0	BAR SUM43 D30*L20	Not under eleven cus- tomer	
734	54		DOWKEY MICROWAVE	401T-630832	RF-Switch	Not under eleven cus- tomer	
735	52		DOWKEY MICROWAVE	401T-6208	RF-Switch	Not under eleven cus- tomer	
736	572	LIKELY	TRI-TECH METALS INC.	DD25307920000B0	UNS C61400 D190.5*L2	Not under eleven cus- tomer	
737	365		STEADFAST	520100205R	TRANSISTOR	KAI	S
738	335		DIAMOND MICROWAVE	Q34501_CST	CST Thermal RF Analy	EMWAVE	
739	222		Beta Transformer	13290	TRANS PULSE	HANWHA	P
740	536	LIKELY	TRI-TECH METALS INC.	DD25277160000B0	BAR, SUM43 D90*L150	Not under eleven cus- tomer	
741	186		Data Device Corporation	BU-61581S1-100	IC	HANWHA	H
742	62		DOWKEY MICROWAVE	402A-3301	RF Switch	Not under eleven cus- tomer	
743	64		DOWKEY MICROWAVE	402A-420132A-ROHS	RF Switch	Not under eleven cus- tomer	
744	312		APERTURE OPTICAL SCIENCE	8U5S4411	PRIMARY MIRROR	HANWHA	M
745	566	LIKELY	TRI-TECH METALS INC.	DD25285350000B0	AL BRONZE AMS 4640 D	Not under eleven cus- tomer	
746	741	LIKELY	TRI-TECH METALS INC.	N2121011	BAR, AMS-QQ-S-763, S	Not under eleven cus- tomer	
747	391		STEADFAST	920305002F	MICROCIRCUIT,DUAL D-	KAI	C
748	307		KNT ENGINEERING	FFNVG	FLASHLIGHT FILTER #1	HANWHA	M
749	69		DOWKEY MICROWAVE	402J-480132	RF-Switch	Not under eleven cus- tomer	
750	394		STEADFAST	920900502F	IC	KAI	S
751	332		DIAMOND MICROWAVE	40-746-0	(WR112) ROTARY JOINT	MMSYS	
752	754	LIKELY	TRI-TECH METALS INC.	SR3354P00482	SHEET, MIL-S-13281,C	Not under eleven cus- tomer	
753	625	LIKELY	TRI-TECH METALS INC.	DD30278320000B0	BAR, AISI 1090 D1.6X	Not under eleven cus- tomer	
754	744	LIKELY	TRI-TECH METALS INC.	PASTICK LAMINATED /L-P-513TYPE PBG/	PASTICK LAMINATED /	Not under eleven cus- tomer	
755	743	LIKELY	TRI-TECH METALS INC.	N2121013	BAR, AMS-QQ-S-763, S	Not under eleven cus- tomer	
756	395		STEADFAST	930604102F	IC	KAI	S
757	268		Beta Transformer	TST-9007	TRANS PULSE-TRANSFOR	HANWHA	K

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758	126		DOWKEY MICROWAVE	531A-430122A	RF Switch	Not under eleven cus- tomer	
759	352		NAECO	LSMF30110-TOP	Cold Plate	HANWHA	L
760	690	LIKELY	TRI-TECH METALS INC.	DD99001650000B0	BAR,GEAR-1-SPUR, UNS	Not under eleven cus- tomer	
761	295		VPT	DVSA2815D	CONVERTER-DC/DC	HANWHA	F
762	446	LIKELY	TRI-TECH METALS INC.	0.500X1.75X2.75	ASTM B777-15, CLASS2	Not under eleven cus- tomer	
763	765		AGM CONTAINER CONTROLS, I	920005	PACKING-SILICAGEL	HANWHA	H
764	735	LIKELY	TRI-TECH METALS INC.	MMS 1597075/T73511.5X3.7X6.03	MMS 1597075/T7351/1.	Not under eleven cus- tomer	
765	417		STEADFAST	RHFAC541K1	54AC Rad-Hard Octal	I3	
766	244		Beta Transformer	NH17109-3	COUPLER	KAI	K
767	153		DOWKEY MICROWAVE	545ST-590802A	RF-Switch	Not under eleven cus- tomer	
768	731	LIKELY	TRI-TECH METALS INC.	MIL-S-5059STAINLESS STEEL304/2.25X4X6	MIL-S-5059STAINLESS	Not under eleven cus- tomer	
769	612	LIKELY	TRI-TECH METALS INC.	DD25937844010B0	UNS S17400 D15X40, B	Not under eleven cus- tomer	
770	672	LIKELY	TRI-TECH METALS INC.	DD73144300300B0	BAR,LINK,SAFETY, AIS	Not under eleven cus- tomer	
771	378		STEADFAST	5962F8762201VXA	IC	KAI	S
772	185		Data Device Corporation	BU-61580G6-390	IC	HANWHA	H
773	591	LIKELY	TRI-TECH METALS INC.	DD25313460000B0	MONEL 500 (D31.8*450	Not under eleven cus- tomer	
774	368		STEADFAST	520400204R	TR	KAI	S
775	401		STEADFAST	940900702F	IC	KAI	S
776	604	LIKELY	TRI-TECH METALS INC.	DD25452340000B0	QQ-S-624 8640 D140*3	Not under eleven cus- tomer	
777	206		Data Device Corporation	NHI-15691RTGW/M	CONTROLLER	KAI	K
778	678	LIKELY	TRI-TECH METALS INC.	DD96100960000B0	AMS 6527 AF1410 D180	Not under eleven cus- tomer	
779	77		DOWKEY MICROWAVE	411C-230802A-ROHS	RF. Switch	Not under eleven cus- tomer	
780	314		APERTURE OPTICAL SCIENCE	LSIC22012	M2	HANWHA	L
781	146		DOWKEY MICROWAVE	545-530822A	RF Switch	Not under eleven cus- tomer	
782	686	LIKELY	TRI-TECH METALS INC.	DD99001130000B0	BAR,SPACER, QQ-C-390	Not under eleven cus- tomer	

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783	158		DOWKEY MICROWAVE	565-520802A	RF-Switch	Not under eleven cus- tomer	
784	156		DOWKEY MICROWAVE	561Y-421123A	RF-Switch	Not under eleven cus- tomer	
785	696	LIKELY	TRI-TECH METALS INC.	DIA5/8X 0.393	ASTM D5989 DIA5/8X 0	Not under eleven cus- tomer	
786	48		DOWKEY MICROWAVE	401T-220832A	RF Switch	Not under eleven cus- tomer	
787	564	LIKELY	TRI-TECH METALS INC.	DD25285290000B0	CDA NO.624 D70*L15,	Not under eleven cus- tomer	
788	376		STEADFAST	5962F8761401VXA	IC	KAI	S
789	422		STEADFAST	RHFL4913KPA-02V	IC	SATREC	
790	104		DOWKEY MICROWAVE	441-480822	RF-Switch	Not under eleven cus- tomer	
791	782		WENZEL INTERNATIONAL INC	96136425-568 REV	QUARTZ	HANWHA	K
792	437		STEADFAST	STRH40N6S1	RAD-HARD N-CHANNEL 6	I3	
793	815		TPA MOTION, LLC	RCS A10-3-3	TOOLS	HAHWHA	3 c
794	806		Premier Technical Services	M2200TDP24HIFG03FG03CG02CG021CG0	NETWORK SWITCHES-FIB	HANWHA	M
795	231		Beta Transformer	B-1126	TRANSFORMER PULSE	HANWHA	H
796	438	LIKELY	TRI-TECH METALS INC.	0.004INCHX11.9INCHX15.75INCH	STAINLESS STEEL (304	Not under eleven cus- tomer	
797	436		STEADFAST	SOC3700RHRG	BJT	MMSYS	
798	589	LIKELY	TRI-TECH METALS INC.	DD25313090000B0	BAR, CDA NO.624 D70*	Not under eleven cus- tomer	
799	386		STEADFAST	920111102F	MICROCIRCUIT, QUAD 2	KAI	C
800	480	LIKELY	TRI-TECH METALS INC.	AMS3660,PTEF 1.58 X 4.41 X 3.86	AMS3660,PTEF 1.75 X	Not under eleven cus- tomer	
801	221		Beta Transformer	13218	TRANS PULSE	HANWHA	L
802	585	LIKELY	TRI-TECH METALS INC.	DD25312580000B0	QQ-N-286 (D25.4*170)	Not under eleven cus- tomer	
803	805		Premier Technical Services	M2200TDP24HICG02CG02CG02CG021FG0	NETWORK SWITCHES-FIB	HANWHA	M
804	602	LIKELY	TRI-TECH METALS INC.	DD25322890000B0	QQ-N-286 (D31.8*130)	Not under eleven cus- tomer	
805	99		DOWKEY MICROWAVE	431J-420803A	SW,3MPT-L-12-SMA-TTL	Not under eleven cus- tomer	
806	356		STEADFAST	10511528	IC	KAI	S

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807	240		Beta Transformer	MLP-2216	TRANSFORMER	KARI	K
808	286		VPT	DVHF2805S	CONVERTER-DC/DC	HANWHA	P
809	626	LIKELY	TRI-TECH METALS INC.	DD31763310000B0	BAR, UNS C62400 D55X	Not under eleven cus- tomer	
810	737	LIKELY	TRI-TECH METALS INC.	MMS 1597075/T73513.5X6.05X10.4	MMS 1597075/T7351/3.	Not under eleven cus- tomer	
811	404		STEADFAST	HCC4051BK1	RAD-HARD SINGLE 8-CH	MMSYS	
812	452	LIKELY	TRI-TECH METALS INC.	1.00X1.375X1.875	ASTM B777-15, CLASS2	Not under eleven cus- tomer	
813	369		STEADFAST	520400206(2N5153SHRG)	TR	KAI	S
814	513	LIKELY	TRI-TECH METALS INC.	ASTM D5989 6.00X4.00X0.25	ASTM D5989 6.00X4.00	Not under eleven cus- tomer	
815	216		Data Device Corporation	SDC14566-105	I.C	HANWHA	U
816	22		DOWKEY MICROWAVE	401-2808	RF-Switch	Not under eleven cus- tomer	
817	93		DOWKEY MICROWAVE	412-2301-ROHS	RF-Switch	Not under eleven cus- tomer	
818	717	LIKELY	TRI-TECH METALS INC.	FA84409932-003	ASTM_B777-15_CLASS_2	Not under eleven cus- tomer	
819	402		STEADFAST	940900702F(M54HC14KT)	MICROCIRCIUT	KAI	S
820	380		STEADFAST	5962F8762401VXC	IC	KAI	S
821	603	LIKELY	TRI-TECH METALS INC.	DD25452260000B0	QQ-N-286 FORM1 D45*L	Not under eleven cus- tomer	
822	592	LIKELY	TRI-TECH METALS INC.	DD25313470000B0	MONEL 500 (D31.8*450	Not under eleven cus- tomer	
823	258		Beta Transformer	NH17147-4-155	COUPLER ASSY	KAI	K
824	707	LIKELY	TRI-TECH METALS INC.	FA84409834-003	ASTM_B777-15_CLASS_2	Not under eleven cus- tomer	
825	668	LIKELY	TRI-TECH METALS INC.	DD72515890000B0	UNS S17400 D150*100,	Not under eleven cus- tomer	
826	677	LIKELY	TRI-TECH METALS INC.	DD73375000400B	BAR, MIL-S-869,135M,	Not under eleven cus- tomer	
827	102		DOWKEY MICROWAVE	431LT-4208	SW, NEW	Not under eleven cus- tomer	
828	833		AIR ROVER	40DT08HD	HOSE KIT	SEGI	M
829	471	LIKELY	TRI-TECH METALS INC.	AMS 5513 304	STAINLESS STEEL PLAT	Not under eleven cus- tomer	
830	828		Phytron, Inc	VSS 33.200.0,6-CR GPL 32/100:1	MOTOR GEARED-STEPPER	HANWHA	S



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831	363		STEADFAST	2N5153SHRG	TR, PNP, HIGH SPEED	HANWHA	S
832	227		Beta Transformer	21049C	TRANSFORMER-2	HANWHA	H
833	442	LIKELY	TRI-TECH METALS INC.	0.04INCHX11.9INCHX15.75INCH	STAINLESS STEEL (304	Not under eleven cus- tomer	
834	17		DOWKEY MICROWAVE	401-220832L-1	RF Switch	Not under eleven cus- tomer	
835	165		DOWKEY MICROWAVE	571ST-590802A	RF-Switch	Not under eleven cus- tomer	
836	505	LIKELY	TRI-TECH METALS INC.	ASTM B209 5052-H32/0.16X48.1X48.1	ASTM B209 5052-H32/.	Not under eleven cus- tomer	
837	399		STEADFAST	940103802F(M54HC4050KT)	IC	KAI	S
838	557	LIKELY	TRI-TECH METALS INC.	DD25282300000B0	BAR, CDA NO.624 D75*	Not under eleven cus- tomer	
839	210		Data Device Corporation	RP-21209D0-100	IC	HANWHA	E
840	329		DIAMOND MICROWAVE	116-2255-0_PM	Program Management	EMWAVE	2
841	722	LIKELY	TRI-TECH METALS INC.	FA84409937-003	ASTM_B777-15_CLASS_2	Not under eleven cus- tomer	
842	573	LIKELY	TRI-TECH METALS INC.	DD25308090000B0	BAR, AISI 1137 D50*9	Not under eleven cus- tomer	

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